Croonian Lectures
ON
POINTS CONNECTED WITH DIABETES.

Delivered at the Royal College of Physicians,

BY F. W. PAVY, M.D., F.R.S.

LECTURE I.—PART II.

THE knowledge obtainable from the urine is limited to that bearing on the outgoing from the body. This is all that the examination of the urine can afford. It cannot unfold to us the nature of the internal phenomena giving rise to the escape of sugar that occurs in diabetes. For the discovery of these we must seek deeper, and learn what we can of the conditions existing within the system appertaining to sugar.

The contrast is very great in our position for prosecuting research at the present day as compared with that of former times. It is curious to note, that although what may be styled a wonderfully exact description of the symptoms and course of diabetes was given by so early an authority as Aretæus, who is supposed to have lived in the first century, yet it was not until two centuries ago that the cardinal feature of the disease—the presence of sugar in the urine—was alluded to. Our renowned former associate of the College, Dr. Thomas Willis, was the first to comment upon the sweet character of diabetic urine, and to suggest that it was due to the presence of sugar. Nothing, however, in Willis's day was known about the true nature of sugar; and, strange as it may read now, it seems to have been looked upon as consisting of a combination of sulphur and saline matter. Doubtfully accepted or ignored, Willis's discovery for a long time attracted no attention. Another century, indeed, was allowed to elapse before any further progress was made. Dr. Dobson, of Liverpool, towards the latter part of the eighteenth century, initiated the prosecution of rational inquiry into the nature of the disease. He confirmed Willis's observation, and verified his conclusions by the evidence of vinous fermentation, and the character of the residue from evaporation of the urine. The first really chemical test employed for the detection of sugar in diabetic urine was suggested by Cruikshank, and consisted of the action of nitric acid in converting it into oxalic acid, which was recognised by its crystalline form. What a contrast between the means now at our disposal and those when taste had to be appealed to for assistance in diagnosis, as history tells us was for some time done by our predecessors, and even later on, when such a test was employed as the one just referred to.

Dobson affirmed that sugar existed in the blood of diabetics, as well as in the urine; but he relied upon the property of taste. Rollo also asserted that he obtained more oxalic acid from diabetic than from healthy blood after treatment with nitric acid. The presence of sugar, however, in diabetic blood was afterwards disputed till Ambrosioni and Maitland succeeded in separating it, and M'Gregor in obtaining evidence of fermentation with yeast.

Perhaps there is no disease the elucidation of which has stood so long impenetrable, and none in connexion with which so many theories have been from time to time broached, as diabetes. It may be almost said to have occupied the position of a kind of privileged subject for speculation. Before the recognition of sugar in the urine as a feature of the disease it was impossible that any propounded view regarding its nature could be worth consideration. When this discovery was made, it is not surprising that the kidney should be looked to as constituting the seat of diseased action; but when it became known that the sugar existed, preformed, in the blood, there was no longer ground for assigning to this organ anything more than the performance of an eliminative operation. Faulty digestion and assimilation were now spoken of. Rollo, from observing the manner in which restriction to an animal diet checks the elimination of sugar, referred the disease to a faulty digestion of vegetable food. M'Gregor, from discovering sugar in the vomited matter from the stomach of a diabetic, after three days' restriction to beef and water, considered that the sugar was formed by a perverted action of the stomach, and from this source reached the blood.

Such was the state of knowledge upon the subject of diabetes when, about the middle of the present century, Bernard's investigations were conducted, which opened out a new field of inquiry, and from which it is not too much to say that an altogether new era has been established. Whatever may be the opinion held as to the validity of Bernard's glycogenic theory taken in the shape he has propounded it, there can be no doubt that he must be credited with a great and important discovery—a discovery which has formed the foundation of our present position, and without which it is scarcely possible that any advance could have been made.

I do not propose to detain you with an account of the experimental results upon which Bernard based his glycogenic theory. The particulars are so well known as to render it quite unnecessary that I should enter upon them here. What we want is to know how sugar naturally comports itself within the system in order that we may be in a position to ascertain the nature of the deviation from healthy action that occurs in diabetes. It is indispensable that we should be quite sure we are upon sound physiological ground before we can hope to frame well-founded pathological conclusions. If our physiological views are incorrect, we can hardly be otherwise than led astray upon entering the field of pathology.

Under the glycogenic theory, it is contended that besides the sugar derived from the starch and sugar ingested, and thus entering the system from without, the liver is endowed with a glycogenic function, through the exercise of which sugar is constantly being formed within and supplied to the circulation. It is a necessary component, it is said, of the physiological state that the blood should be constantly receiving this supply of sugar; and, through the glycogenic function, an animal is placed in a position of independence as regards the supply of sugar from without.

Originally the view was entertained that the sugar thus reaching the general circulation was destroyed by oxidation in the lungs. If this view were correct there would be something rational about the comportment of sugar in the system. Nothing reads more plausible than that the sugar derived from the food, and presumed to be formed by the exercise of a glycogenic function in the liver, entering the general circulation together through the hepatic veins should be conducted to the lungs, the organs through which the blood next passes, and become there destroyed by the influence of the oxygen of the respired air. There would be entrance at one point and destruction a step further on, and the arterial system from which the kidney is supplied would escape being charged in such a manner as to lead to an outflow with the urine; for, as I shall subsequently show, in proportion to the amount of sugar present in arterial blood so is there an elimination of sugar with the urine.

It is admitted, however, that the results of observation are not consistent with this view, and it has been fully abandoned. It is now asserted that the destruction occurs in the peripheral capillaries, and chiefly in those of the muscles, but no precise or definite account is given about the manner in which the process is accomplished. We have only the surmise to deal with that it undergoes combustion resulting in the production of carbonic acid and water, and to this combustion it has been suggested part of the heat engendered by muscular contraction is attributable.

Such is the well-known doctrine comprehended under the glycogenic theory. Summarily it may be said that the issue to be dealt with is an ingress of sugar on the one hand into the general circulation through the hepatic veins from alimentation, and hepatic formation; and its destruction on the other hand in the peripheral capillaries. Presuming these two operations to be carried out, and to stand in such relation to each other that the destruction is equal to the ingress, there will be no accumulation within the system. Presuming, however, the relation to be altered, and the influx to be increased so as to exceed the power of destruction, or, conversely, the power of destruction to be reduced below the rate of influx, it follows as a necessary consequence that accumulation would occur. The primary phenomenon in diabetes is accumulation of sugar in the circulatory system, and the question has to be put, Which of the two factors is instrumental in determining the result? Bernard, in speaking of artificial diabetes, answers the question by saying that he is of opinion the accumulation is due to an

exaggeration of the formation of sugar, and not a lessening of its expenditure.

Let us now see how the subject stands viewed by the light of the experimental evidence that can be, at the present time, brought forward.

It is known that several years back I obtained results of an unlooked-for nature which gave a new complexion to the facts upon which the glycogenic theory had been based. A pupil of Bernard, and a full believer in the truth of what he had propounded, I was conducting investigations directed towards attempting to discover something about the manner in which sugar underwent destruction in the lungs, for at that time it was in these organs that the destruction was presumed to occur. In these investigations I found that what had been taken, from ordinary post-mortem collection of blood, to represent the physiological state, was fallacious. It had been asserted that the blood of the hepatic vein contained sugar to the extent of 10 to 15 parts per 1000 during fasting, and from 15 to 20 parts per 1000 at a period of full digestion. The mean quantity of sugar found in the liver was said to vary from 15 to 20 parts per 1000. In opposition to this I found that blood taken from the right side of the heart by catheterism during life contained what I described as a trace of sugar. It gave the same kind of reaction as the blood previously collected from the carotid artery. I could discover no appreciable difference of behaviour between the two. On subsequently obtaining blood, however, from the right side of the heart of the same animals in an ordinary manner after death it showed a presence of from 5 to 9·40 parts of sugar per 1000, and such was the state that had previously been taken as representative of the condition existing during life. The livers of the animals employed, examined a short time after death, were found then to contain sugar to the extent of from 24 to 41 parts per 1000.

In three subsequent quantitative analyses of blood collected from the right ventricle during life the figures yielded, corresponding with what I designated a trace of sugar, were 0·47, 0·58, and 0·73 parts per 1000. It will be later on seen that these figures, which I obtained twenty years back, closely accord with the results I have recently procured by a new and delicate process that I shall subsequently have specially to refer to.

After noticing the fallacy of drawing a conclusion of the natural or ante-mortem state of the blood from the examination as hitherto conducted, I looked to the liver, and employed means to ascertain if a similar kind of error had prevailed with respect to this organ. I need not refer to the details of the processes adopted. It will be sufficient here to say that on placing the liver in a position instantly after death to prevent a post-mortem production of sugar, a totally different state from that which (through the results upon which the glycogenic theory had been framed) had been presumed to exist, was met with. Instead of, as had before been believed, the organ containing in its ante-mortem or natural condition a notable amount of sugar, evidence was furnished that at the outside only traces of the principle were present. I thought at the time that our method of analysis was not adequate to indicating in a reliable manner the precise amount, and I therefore simply spoke of it as a trace. We shall see at a later period, from my new process of analysis, what this expression actually corresponds with.

My results were first communicated to the Royal Society in 1858, and afterwards in a shape for publication in the Society's Transactions in 1860. I had also an opportunity of showing them in this lecture-room on delivering the Gulstonian Lectures in 1862. They have been confirmed by Schiff and Herzen Meissner, Jaeger, Pflüger, Ritter, and Dr. Robert McDonnell of Dublin. Flint and Lusk, in America, admit my representation as regards the condition of the liver to be correct, but are of opinion that a glycogenic function exists, and that the sugar is carried away into the circulation as fast as it is formed. Bernard, until the last few years, remained silent upon the point, and now has given a new series of results bearing upon both the blood and the liver, obtained by an altered method of analysis. To these results it is necessary that I should direct your special attention. Everything depends on our having correct data to proceed upon, and I think I shall be able to show and convince you—in the first place, that the process of analysis that has been adopted is fundamentally fallacious; and in the next, that the condition actually existing is very different from what he has represented.

I take his description from the *Comptes Rendus* of the Academy of Sciences of Paris. The process involves the employment of potash in the quantitative determination to an extent to prevent the precipitation of the suboxide of copper. When a pure solution of sugar is dealt with no amount of potash will interfere with the precipitation of suboxide from the copper solution. In the presence of ammonia, however, the suboxide is held in solution, and the effect is simply a decolorisation of the liquid. Now, in Bernard's process the organic matter existing in the product to be examined supplies the source of ammonia, and thus, instead of the red oxide falling, as in the usual method of procedure, and leading to decolorisation from precipitation of the copper, the reduction occurs in the liquid, and, in proportion as it takes place the blue colour of the original solution fades, to be ultimately replaced by a colourless condition. This process is recommended from the facility it offers for enabling the precise point when decolorisation is effected to be ascertained—a condition which is often by no means satisfactorily to be determined when the ordinary process is employed, owing to the precipitated suboxide being diffused through the liquid and obscuring the loss of blue colour.

In the application of the process to the determination of the amount of sugar in blood the usual method of getting rid of the albuminous and colouring matters by the aid of heat, after the addition of sulphate of soda is adopted. There is a minor point which I criticised in referring to the process in a communication presented to the Royal Society in June last. It bears on the instructions given for the calculation of the volume of liquid obtainable from the weight of blood and sulphate of soda employed. Amongst my remarks I spoke of the loss of liquid by evaporation during the process of heating as calculated to produce a variation in the result. I am glad to avail myself of this opportunity of saying that, owing to an omission in the written extracts of Bernard's communication in the *Comptes Rendus* it escaped me to notice that directions were given for counterbalancing this loss by the supply of water. So far, therefore, my criticism was unjustified, but the main point upon which the process is open to objection, and which I shall mention later on, remains unaffected.

The sugar is estimated in the prepared liquid by dropping it into 1 cc. (about 17 minims) of the standard copper solution, to which 20 to 25 cc. of a concentrated solution of potash have been added, and noticing the quantity required to produce decolorisation. The amount of standard solution taken is very small, and any error occurring becomes correspondingly multiplied in calculating the proportion of sugar per 1000 parts. We need not, however, quarrel with this part of the procedure, but assume that the exact amount of standard solution is taken, and the exact amount of liquid required to decolorise is ascertained; 1 cc. of the standard solution being equivalent to five milligrammes of sugar, this amount of sugar will be put down as present in the quantity of liquid used to decolorise.

Through the aid of this process Bernard establishes the proposition that sugar is never wanting in the blood of man and of the lower animals during life, whether in a normal or in a pathological state, and that in the normal state the amount fluctuates between the limits of 1 and 3 parts per 1000. No matter what the nature of the alimentation, whether the animal be herbivorous or carnivorous; no matter whether the blood be taken at a period of digestion or fasting, or even during the existence of fever, it always contains about the same quantity of sugar. Below 1 per 1000, nutritive action, he says, is not being carried on to its full functional extent; while above 3 per 1000 the limit of the capacity of the blood is passed, and the sugar overflows through the renal organs and the animal becomes diabetic. His results further represent a marked difference in the amount of sugar contained in arterial and venous blood, the difference harmonising with the occurrence of a process of destruction in the systemic capillaries. Taking the several analyses mentioned (*Comptes Rendus*, t. lxxxiii., No. 6, p. 373), the mean difference between arterial and venous blood stands at about 0·300 part per 1000. In the experiment furnishing the least difference, the figures stand 1·100 per 1000 for the arterial, and 1·080 for the venous blood. In the experiment showing the greatest difference, the figures are 1·510 per 1000 for arterial, and 0·950 for venous blood, which, if true, would represent a loss of sugar amounting to 0·560 per 1000 during the passage of the blood from the carotid artery to the jugular vein, for in this instance these were the vessels from which the specimens of blood were obtained.

Now, looking at these results as they stand, it must be admitted that they give decided support to the glycogenic theory. The question, however, has to be put, Are these results to be relied upon—do they afford a representation of the true state existing? This is the point to which I will next proceed to direct your attention.

ON

SURGICAL EVIDENCE IN COURTS OF LAW,

WITH SUGGESTIONS FOR ITS IMPROVEMENT.

BY JOHN ERIC ERICHSEN, F.R.S., F.R.C.S.,

SURGEON EXTRAORDINARY TO THE QUEEN; CONSULTING SURGEON TO UNIVERSITY COLLEGE HOSPITAL; AND EMERITUS PROFESSOR OF SURGERY IN UNIVERSITY COLLEGE.

(Continued from p. 452.)

II.—INJURIOUS INFLUENCE OF THE PRESENT SYSTEM ON WITNESS, COUNSEL, AND JUDGE.

MANIFOLD are the evils and great the inconveniences that arise from the practice of trying surgical questions before legal tribunals that possess little or no knowledge of medical science.

These evils affect alike, though in differing degrees, witness, counsel, and judge. Of these I will instance a few. But first let us consider the effect produced on the mind of the surgical witness and on the character of his answers. In order to make himself at all intelligible, the witness is often obliged to be very defined in his answers, and he often becomes insensibly more positive and dogmatic in his statements than he would have been had the tribunal that he was addressing been better able to understand their real import. He cannot venture to employ those minor shades of expression by which he could more correctly have explained his meaning had he been addressing members of his own profession. The court is much in the position of a person who is being addressed in a language with which he is but very imperfectly acquainted. He can comprehend a few sentences plainly spoken, but is completely lost if the person who addresses him ventures upon those niceties of speech by which his meaning would be rendered much more minutely accurate, and consequently more intelligible to anyone thoroughly acquainted with the language he employed. If a medical witness uses shades of expression to designate different degrees in the severity or nature of the symptoms that he is describing he will probably be supposed to be using words to conceal his real thoughts, when he is, in fact, simply employing the best forms of expression that he can devise in order to convey with clearness those thoughts which are unfortunately beyond the scientific comprehension of his hearers, but which would be perfectly intelligible and convey very accurate ideas to the mind of anyone well informed in medical science. Hence, in order to make himself understood, the witness is apt to become too dogmatic in his answers, and he is even occasionally induced to hazard statements which he would scarcely have made before a more scientific tribunal. I have heard, for instance, one eminent surgeon, now dead, when asked if he agreed in the evidence that had been given on behalf of the plaintiff, reply, "I dissent from every word of it." I heard another designate the employment of the electric test for the determination of the irritability of muscles as a "mere toy," which might be useful to amuse by galvanising the legs of frogs, but could be of no service as a means of diagnosis. Now, there can be little doubt that both these gentlemen were led into too positive an assertion in one case, and to an undue disparagement of an important scientific test in the other, because they were addressing an audience which might have misjudged their meaning had they attempted to qualify it.

Another inconvenience in giving medical evidence before a tribunal that possesses no scientific knowledge is this, that the most ordinary terms are liable to misconstruction. They are understood, in fact, by the non-medical public in a sense different from that in which they are received by medical men. Take, for instance, the word "paralysis." Every third-year's student knows that there are various forms and degrees of paralysis, and that the term "paralysis" is a widely inclusive one; that many affections totally distinct in cause, in seat, and in degree, are included under that term: that it may be cerebral, dependent on disease of the brain—spinal, on some lesion of the cord—or local, on an affection of a particular nerve; that it may affect sensation or motion, or both; that it may be hemiplegic or paraplegic; that one muscle only, as the external rectus of the eye, or one group of muscles only, as those supplied by the portio dura of the seventh, or by the external popliteal in the leg, or the musculo-spiral in the arm, may be affected by it. But to the non-medical man the word "paralysis" is evidently usually associated with one form only—that of cerebral paralysis, giving rise to hemiplegia. Hence the use of the word "paralysis" in a different and especially in a more limited sense will often occasion great confusion. If a surgeon uses the word "paralysis" when only one muscle or one group of muscles is affected, and qualifies it by speaking of it as partial, he will very likely be supposed to exaggerate the condition of the patient and to endeavour to mislead the court. If he says that the plaintiff has paralysis in the lower limbs, he will probably be asked if the patient walks with a "paralytic gait," it being evidently erroneously supposed that there is one peculiar method of walking which is common to all paralytic people. He may reply that there is no such thing as a "paralytic gait"; that some paralytic people cannot walk at all; that a hemiplegic patient, if able to walk, uses his limbs in a totally different manner to a paraplegic one, and that a paraplegic patient will walk very differently, according to the extent of his paraplegia, the degree of it, and the special nerves affected by it. It is quite clear that a question like this, which appears to be an extremely simple one, is yet of a nature to which no dogmatic reply can be given, and a prolonged explanation is scarcely admissible. The witness cannot deliver a clinical lecture on paralysis from the witness-box, and nothing short of that would explain the different forms of affections and the different movements made by patients variously affected by this disease. But a question of this kind is very apt to be pursued still further. He will be asked whether the patient "drags his leg," or raises his heel, or lifts his toe first, and the climax of absurdity will be put to the whole thing when he is probably asked whether he has examined the soles of the patient's boots in order to diagnose the extent and the direction in which the paralysis existed. It is in vain that the surgeon may urge that many patients who are not paralysed wear their boots very unequally, that the boots might be new, and that time had thus not been given to wear them more on one side than the other; that if the patient were malingering he might easily have rubbed down one side of his boots to give a false aspect of wear; that the examination of boots is rather a matter for a shoemaker or a detective than a surgeon; that the latter possesses more certain means of diagnosis to determine the existence or not of paralysis, and of its extent, than the examination of the soles of a patient's boots. He may say all this, but all is in vain; the boots are pertinaciously stuck to, and the condition of their soles is triumphantly appealed to as evidence of paralysis, or of malingering, as the case may be.

I can picture to myself a student presenting himself for examination, and giving the state of the patient's boots as one of the diagnostic signs of paralysis, and the blank look with which the examiner would receive this novel and certainly not very precise or scientific method of diagnosis. All this is sufficiently absurd, and, were no important issues at stake, the surgeon might afford simply to smile at such a course of inquiry. But when he finds that the object of such an examination is to discredit the evidence which he has truthfully and conscientiously given, to prejudice the jury against him, and to lead them to what he believes to be an act of injustice towards his patient, his feelings become those of indignation and annoyance rather than of amusement.

If the surgeon ventures out of the beaten track, and suggests that some of the symptoms complained of are referable, not to the condition of the brain or of the cord, but to another system of nerves, with the nature, the anatomical relations, and the functions of which all scientific practitioners are well acquainted—namely, the sympathetic; if he ventures to explain a congestion, a discoloration, or a loss of temperature in the part by some disturbance of their vaso-motor action—a doctrine which is perfectly intelligible to any ordinarily well-educated medical man, and the soundness of which would at once be

admitted,—he soon finds that he has got out of the depth of the Court, and that he has become too technical for those who know "but little, or less than little," of medical science; and surely he can scarcely be censured or considered to be in fault in failing to give an intelligible explanation of somewhat obscure phenomena when those whom he addresses, however learned in their own profession, and however accomplished as scholars, or refined as men of taste, are, from want of a knowledge of medical science, utterly incapable of following out the details of a strictly medical argument.

But it is not only that the surgeon finds that he often has a great difficulty in making a scientific explanation of obscure physiological and pathological phenomena intelligible to those who are not acquainted by previous education and study with biological science. He finds that, however clear and distinct his statement may have been, there is a tendency to disparage and break it down in cross-examination by a method which appears to everyone acquainted with the subject to be in the highest degree unfair, and as tending to obscure rather than elicit the truth, although the course that I am about to describe doubtless appears perfectly just and proper to those who practise it.

Every medical man knows that in the vast majority of diseases a correct diagnosis is formed, not by attention to one symptom only, but by taking a whole group of symptoms, which when associated together constitute positive evidence of the existence of some one particular form of disease, though each one of these symptoms when taken separately, may be common to many affections, surgical or medical. To use a technical expression, the "pathognomonic" group of symptoms is "pathognomonic"—that is, absolutely and positively characteristic of, and indeed in themselves constitute, a particular disease, but not one of that group of symptoms taken separately is absolutely diagnostic of or constitutes any disease. Now the system of which I am speaking, and which, as I have just said, doubtless appears a perfectly reasonable and proper one to a non-medical man, is this—that the cross-examining counsel asks the surgeon why he says that the patient has such and such a disease? The surgeon enumerates a group of symptoms. The counsel then breaks up this group into its units, and, taking each one separately, necessarily obtains from the medical witness the admission that it by itself is not characteristic of the disease in question, but is common to many. To illustrate my meaning by an example I would say that the medical witness states that the patient has had typhoid fever. He is asked on what grounds he makes his statement. He says that the patient had great prostration, a high temperature, a brown tongue, diarrhœa, and spots on the abdomen. Now it is quite clear that if he is asked whether any one of these symptoms is indicative of typhoid fever, he must say no; that prostration, a brown tongue, diarrhœa, high temperature, and red spots on the abdomen, taken separately, may occur, not only independently of typhoid fever, but as a consequence of a great variety of different morbid conditions. It is in vain that he urges that it is the peculiar aggregation or grouping together of the symptoms that is indicative of the disease, and not any particular one.

Mr. Alfred Wills, Q.C., than whom no man is better able to give an opinion on such a subject, writes thus:[1]—"Cross-examination is very often a keen encounter of wit, and he who gets the worst of it does not altogether like it—nay, sometimes he is very much irritated and feels very sorely, for the time being, at all events, towards his antagonist who has foiled him." No one who has been much in courts of law can fail to remember instances in which the foiled counsel, unable to "shake" the evidence of a witness, has given vent to his ruffled feelings in his reply; when, secure from interruption or rejoinder, he could revenge himself on a defenceless opponent by the exercise of all his powers of sarcasm and invective. But, according to Mr. Wills, whose great experience must have given him ample opportunities of judging upon this subject, even the occupants of the Bench would not be proof against the irritating effects of prolonged cross-examination, if carried on by them, for he goes on to say: "Human nature is not changed by being outwardly clad in scarlet and ermine, and judges must be more than mortal if they could conduct a rigorous and critical cross-examination, and remain under all circumstances in a judicial frame of mind to the last."[2]

I never listen to a counsel who in his reply, or even to a judge who in his summing up, deals mercilessly with a witness whose testimony has not been in accordance with the interests of the one or the susceptibilities of the other, without having forcibly brought to my mind an occurrence that happened many years ago at a meeting of the British Association for the Advancement of Science. In the year 1844 the Association—to the Physiological Section of which I was then secretary—met in a large cathedral town. An animated discussion arose in the Geological Section on the comparative truth of the Mosaic account and the geological version of the Deluge. The Dean, who strongly defended the Mosaic account, was thoroughly beaten by the geologists. The next Sunday he preached a sermon in the cathedral, taking for his text a verse from the seventh chapter of Genesis, and proving, to his own satisfaction at least, the absolute accuracy in all its details of the account there given of that great cataclysm. On entering the vestry after the service, he was heard to exclaim to a friend: "Ah, none of those fellows could answer me there." It is not alone in a cathedral that a man may exclaim, "None of those fellows can answer me there."

Conflict in evidence is apt to be fostered by the different motives that actuate the counsel and the scientific witness. The counsel seeks victory; the scientific witness has, or should have, for his sole object the establishment of the truth. These differing motives often lead either to collision of opinion between witnesses and counsel, or to apparent conflicts of evidence between the witnesses themselves. The counsel seeking, as is undoubtedly his duty, to win his cause, or at least to do the best he can for his client, will often endeavour to perplex and harass the scientific witness by putting questions to him, and insisting upon a categorical answer to them, which cannot be given in justice to the case. It is not to every scientific question that a bald "yes" or "no" can be given in answer. Many answers require explanatory statements in order to prevent the reply being too dogmatic and limited in its scope. It is true that such an explanation can be given by the witness, but not until after the question has been answered, and then the answer is taken and the explanation too often ignored.

When a medical man is asked for an opinion as to the probable course or duration of a case, he draws in a great measure from his experience in giving it. It may be difficult for him to assign definite reasons for the particular opinion he holds, but he has generally found such and such cases recover; others do not—why he cannot tell: "opinion probably right, reasons probably wrong."

There is no distinct precedent or rule of practice to guide the surgeon in the formation of his opinion. If all men were cut out of the same block; if all accidents produced exactly the same effects; if all patients had the same skilled surgical attendance and careful nursing; if there were the same freedom from care or the same amount of tenacity in all; if, in fact, all circumstances, moral and physical, were equal in individuals who were exactly alike,—every surgeon would form the same opinion, and no conflict could occur. But as it happens that every one of these circumstances is unequal, and to what extent the inequality extends is not always easily ascertainable, the surgeon has no positive data to go upon, and must often give a somewhat empirical opinion as to the future condition of the patient.

(To be continued.)

[1] Nineteenth Century, Jan., 1878, p. 173. [2] Loc. cit., p. 174.

ON THE OCCURRENCE OF COLLAPSE, EMPHYSEMA, AND DESTRUCTIVE PNEUMONIA IN ASSOCIATION WITH TUMOURS COMPRESSING THE BRONCHI.

BY J. PEARSON IRVINE, B.A., B.Sc., M.D. LOND.,
ASSISTANT-PHYSICIAN TO CHARING-CROSS HOSPITAL.

(Continued from p. 416.)

FIRST, with regard to the occurrence of emphysema. It is clear that pressure on nerves can have nothing to do with this, no matter what their power in the causation of collapse or destructive pneumonia. The case with which I introduced this paper is an excellent example of emphysema from stenosis. It was decided and observed for several months, and for long obscured the sublying cause. But at length the patient's condition during life, as well as

the autopsy, clearly proved that emphysema had occurred in association with external compression of bronchi. Again, in two cases of destructive pneumonia, which I showed at the Pathological Society (1876-1877), emphysema in all probability preceded the pneumonia. Details of these cases will be found in the Pathological Transactions, but I shall allude to them again further on. In both the lungs were enlarged, and the thoracic diameters increased. Dr. Ogle relates a case in which the left bronchus was almost obliterated by a compressing aneurism the size of an orange; the lung was emphysematous, and overlapped the heart. The left recurrent laryngeal was severely "crushed." In another case the left bronchus was compressed; there was no collapse, but the left lung was gorged with serum, and the mucous lining of its bronchi inflamed. Here possibly was the transition stage from emphysema to destructive pneumonia. In a third case, both bronchi and the trachea were compressed; the chest during life was everywhere resonant, though air did not seem to enter the left base as freely as the right. The mucous membranes were livid and congested, and here again there was probably a transition stage. In a fourth case the lungs were natural, though the left bronchus was compressed. Thus, in four (out of eight cases) there was in three emphysema, and possibly also in all four; while in three others of the eight, the aneurisms had ruptured into the bronchi, and thus obscured results as far as the subject under consideration is concerned. In the eighth case the lung on the side of compression sank in water, and its changes were, perhaps, those of an early destructive pneumonia, though probably the changes were due to direct invasion of the lung, as the author speaks of it as being "compressed."[1] Dr. Ogle's admirable series of cases tend to prove that emphysema, and not collapse, is the most usual sequence of pressure on bronchi, and the cases are certainly none the less valuable because their bearing on these points is not noticed.

We naturally turn to the writings of Sir Wm. Jenner on the subject of emphysema. This physician, in his article on Emphysema (Reynolds's System, vol. iii.), does not allude to outside bronchial pressure as a cause, but some assertions, laid down with his usual clearness, favour the view that emphysema may be due to it. He says: "Strong expiratory effort, while there is impediment to the free escape of air from the whole or a portion of the lung, is now admitted to be the most efficient determining cause of over-distension of the air-vesicles." In gradually growing obstruction of a bronchus there must be great impediment to the expiratory effort; and, besides, bronchitis must in all probability occur early, and thus aid in bringing about the very conditions which Sir William deems most potent in producing emphysema.[2] It is interesting to note also that Dr. Wilson Fox, speaking of collapse (Reynolds's System, article Pneumonia), states that sometimes, where the lungs are found collapsed, they are really emphysematous.

I believe that as good an explanation of emphysema from outside compression of the bronchi may be given as that which Dr. Gairdner has advanced with regard to the occurrence of collapse where the obstruction is within the tubes and movable. This is saying a good deal, because Dr. Gairdner's ball-and-socket theory of the action of mucus in causing collapse has been accepted by most physicians. To his admirable investigations I shall allude again in noticing collapse from bronchial pressure. But as regards emphysema from compression and obstruction by intra-thoracic growths, the circumstances are altogether dissimilar from those discussed by Dr. Gairdner. Here the pressure is outside the bronchi, and immovable.

It is a fact in physiology that the inspiratory force is always greater than the expiratory; this must be borne in mind in attempts to explain the occurrence of collapse and emphysema. But in cases of outside obstruction the fact is of as great moment that in inspiration there is a tendency for all parts within the thorax to dilate, and that in expiration the contrary of course takes place. Thus it comes about that bronchial tubes partially obstructed by internal accumulations frequently become impermeable to the passage of air, because of the additional pressure placed by the lung in expiration on the already impeded air-tubes. Such internal impediment is, however, usually movable by cough; but when the obstruction is fixed on the bronchial wall or outside the bronchus, it is plain that a gradual difficulty must be met in the efforts of expiration, while it is equally plain that inspiration must by its dilating force tend to overcome the impediment; so that the early effects of obstruction from outside must be imperfect emptying rather than imperfect filling of lung, and consequently there must be from the first a tendency to emphysema. Inspiration struggles to overcome the difficulty, and the more it does the more is it likely to succeed; but expiration by increasing its force would simply increase its own difficulties; the more it laboured, the more would it compress the bronchus at the seat of obstruction. But expiration must gradually become more and more feeble because of loss of lung-elasticity, and hence further phenomena are likely to happen, as I shall afterwards show. It is clear, if the above views be correct, that in the efforts of the lung to empty itself of air a continual strain must be placed on the inner surface of the air-vesicles, and that emphysema must sooner or later result, even though coughing be of little severity; though of course the cough—which early on, at any rate, is likely common enough—must greatly hasten the lung-change. The lung-note may be hyper-resonant, and yet the breathing be very feeble and associated with scanty rales, without there being anything more than bronchitis and emphysema; but as the breathing gets weaker the lung-note also becomes deficient, and finally reaches the degree of dulness met with in some cases to be reported.

Thus, as I shall try to show, we may pass by gradations to a second condition, "destructive pneumonia," which has been attributed to pressure on the pulmonary plexuses. I have described the changes met with in this disease (Trans. Path., 1876-1877), and was then ignorant, I am sorry to confess, of the paper by Sir William Gull, to which I have alluded. I am glad to find that the descriptions accord for the most part with those given by him, Sir William Gull's, however, being much less detailed than mine. The similarity in description persuades me that a similar cause has been at work in all, or, at any rate, that the actual changes were brought about mechanically in exactly identical fashions.

It seems best to describe briefly, at this stage, the morbid phenomena met with in the so-called destructive pneumonia associated with pressure at the root of a lung. The appearances in my cases were as follow:—The affected lung was large, and completely filled its own side of the thorax, and encroached to the middle line. Its pleura was vastly thickened, but not adherent greatly to the costal pleura, though thickly adherent to the tumour causing the compression. The lung looked like a solid viscus, was hard to the feel, and heavy. On section, especially in the lower lobes, the appearances were striking: entire absence of air-breathing tissue, irregular masses of consolidation, masses almost like circumscribed abscesses which had undergone caseation; and, generally, cribriform cavities, bounded and crossed by thick fibrous bands, involving remnants of lung-tissue and vessels. These cavities were choke-full of reddish liquid, half bloody, half purulent, looking like a mixtnre of blood and pus, and microscopically consisting of pus and disintegrated blood. The bronchi traced beyond the seat of obstruction were in various stages of change. Early on they were more or less completely ulcerated and enlarged irregularly, and towards their evident terminations lost in the cavities mentioned. In most places they could not be traced beyond their tertiary bifurcations. The upper lobes were less affected than the lower, though they had suffered direct compression by the tumours; they showed an early stage of the changes met with in the lower lobes; there was ulceration and lividity of their bronchi, partial disintegration, with the formation of small cavities, but towards the apices and anterior borders of the upper lobes some air-breathing tissue was left. In the cases thus described, the lung was larger than natural. I give an abstract of the two.[3] In Case 1 (female, forty-five years of age) there was a double

[1] "Eight Cases of Aneurism, in which Bronchi were Compressed," Dr. Ogle (Path. Trans., vol. xvii., 1). The author, by the way, remarks that Dr. Stokes believed the right bronchus to be oftenest the seat of compression. I cannot agree with this view. The matter is of clinical importance, as a knowledge of the direction in which tumours mostly grow will help us to investigate obscure signs with better results.

[2] Pathologists have passed by the emphysema which follows outside bronchial obstruction, and for the most part clinicians also. But it is a fact that "full lung-note" has been remarked as one of the evidences of bronchial stenosis.

[3] For details, *vide* Path. Trans., 1876-7.

aneurism of the aorta; the first part of great size, involving the arch and encroaching on the lung, but doing little mischief thereby; and the second fusiform, and a little larger than a hen's egg, on the descending aorta, immediately opposite the left bronchus, which it gripped. The aneurism had not ruptured, but the bronchial wall adjacent to it was perforated, and the opposite mucous membrane ulcerated extensively; these results being due evidently to pressure, with such flattening of the bronchus that its walls rubbed against one another. At the moment of death a few ounces of purulent-looking stuff (for the first time) escaped from the mouth, and was exactly like that found in the lung beyond the seat of obstruction. The left lung had all the appearances of destructive pneumonia. The vagi were compressed, and the recurrent laryngeals were stretched equally on the two sides. But no destructive change had occurred in the right lung. The left pulmonary plexus could be readily dissected, and was distinctly protected from pressure by the firm and unyielding bronchus which the aneurism could not displace, but which it had compressed all the more effectually. In Case 2 (a man aged forty-two) an aneurism, the size of an orange, springing from the ascending aorta, directly compressed the left bronchus. It had not ruptured, but had caused ulceration of opposite walls of the bronchus by their compression against each other. The corresponding lung was destroyed in the same manner as in the first case, the difference being one of degree only.[4] The nerves were but little affected, and equally on the two sides. The right lung was simply in a condition of compensatory emphysema. The patient was under observation about three months, and the evidences of consolidation, with imperfect entrance of air, came on gradually. In neither this nor the former case did the side fall in, and in each the left lung was, though so destroyed, larger than normal. Nothing indicated collapse as a forerunner of the vast changes; which beyond all doubt were due to direct compression of the bronchi.

It is impossible to refer to more than a few cases which bear on the subject. In all these the direct relationship between the cause and effect (as far as the bronchi are concerned) is passed by. I would ask attention to the short account I have given of some of Dr. Ogle's cases, especially to those in which, without any collapse being present, there were signs in the bronchial tubes of the beginning of the destructive process, and also in the lung affected—engorgement &c., for example,—because these early stages of change are of value in efforts to determine the whole pathological process. Dr. Farquharson[5] related a case for Surgeon-Major Wyatt, in which an aneurism compressed the left bronchus and there was complete consolidation of the left lung. Again, in Dr. Hayden's "Diseases of the Heart" there is a record of a post-mortem examination, in which destructive changes in one lung were found; the bronchus was compressed by an aneurism, and it is likely that the changes were due to the compression, though the author does not allude to the question. But Sir William Gull has attributed destructive pneumonia to pressure on the nerves, and quotes several cases in proof of this view.[6] In all the changes were one-sided, and he admits that the balance of evidence from physiological experiments favour the opinion that section of one vagus does not produce obvious effects in the lungs, though it has been shown that division of both vagi causes destructive processes—effusion of serum, purulent infiltration, and sometimes gangrene of the lungs.

I will venture on a brief *résumé* of the cases on which the theory of destructive pneumonia from nerve-paralysis is dependent. It should be mentioned that Sir William Gull nowhere alludes to bronchial compression as an agent in the production of this pneumonia. In the first case an aortic aneurism extended downwards and backwards, and compressed the left vagus and adjacent branches of the pulmonary plexus. No mention is made of the left bronchus, and, in the absence of such, it may be asked whether it was not possibly compressed, seeing that the pulmonary plexus was implicated. Nor is mention made of the state of the nerves on the right side. The left side was flattened, and the lung found in a state of destructive pneumonia. Sir William Gull believes that collapse had come on with paralysis of the bronchial tubes, and that pneumonia followed. The case was under observation eleven days only. In the second case there were physical signs of consolidation of the right lung and of imperfect entrance of air. Post mortem an epithelial cancer at the commencement of the œsophagus was found to have invaded the tissues in the mediastinum, and especially those about the right bronchus, which were infiltrated by cancerous growths. The right pneumogastric was so far involved that it could not be traced to its distribution. One of the bronchial glands, enlarged by cancerous change, had extended into the tissue of the right bronchus. The right lung was extensively consolidated, and the changes in it were undoubtedly those of destructive pneumonia. The author admits that in this case the destruction could not be unequivocally attributed to disease of the nerves; he gives no share, however, to the bronchial obstruction, but thinks that obstruction of the absorbents and the bronchial veins would influence the result. In the third case there was "fibrous thickening" of the mediastinal tissues and around the right bronchus (but not narrowing or compressing it). The right vagus and pulmonary plexus were implicated, and the former could not be traced through the growth. There was flattening of the corresponding side during life, with absence of entrance of air. The patient was only seven days under observation. The right lung was changed in like manner as in the other cases. The left lung was healthy, and the bronchi on this side were free. Sir William Gull says "the case affords an excellent illustration of the effects which are referable to paralysis of the pulmonary plexus on one side." Here also he thinks collapse followed upon paralysis of the bronchi. The disease was questionably malignant, and it is not stated whether the patient had or not had syphilis.

(To be concluded.)

[4] Both patients were under the care of Dr. Silver, to whose kindness I owed the opportunity of showing the specimens.
[5] Path. Trans., vol. xiv.
[6] Guy's Hospital Reports, Third Series, vol. v., 1859.

CLINICAL REMARKS ON A CASE OF CÆSAREAN SECTION.

By HENRY MORRIS, M.A., F.R.C.S.,
SENIOR ASSISTANT-SURGEON TO, AND LECTURER ON ANATOMY AT, THE MIDDLESEX HOSPITAL.

THERE are a few operations on the body which a surgeon may never have to perform; and yet, on the other hand, he may at any moment be called upon suddenly to undertake them. It is therefore his duty to prepare himself, in anticipation, for such a responsibility. Cæsarean section is one of these operations, and, as it is required more frequently in private than in hospital practice, any one of you may possibly have to perform it. For this reason I will endeavour to illustrate the steps of the operation by narrating and commenting upon a recent case.

A short time ago, I was called up by Mr. Smith Richards, of Bedford-square, to go with him and my colleague, Dr. Hall Davis, to see a woman in labour upon whom they had decided it was necessary to perform Cæsarean section. The patient, Mary A. S——, aged forty, had been married eighteen years, was the mother of six living children (the youngest of whom was six years of age), and had had one miscarriage eight years ago. All her previous labours had been good; but since her last confinement she had been under treatment for "paralysis of the muscles of the back" and "rheumatism," and for some time past had stooped, had been getting "curved in the back," and very quickly became tired. She had also been suffering for a long while from cough, unaccompanied by expectoration. She now stated that during this pregnancy the child seemed "very high up," but she had not mentioned this to Mr. Richards when she, as her full time approached, requested him to attend her; and as he had previously confined her, and had heard nothing of her ailments subsequent to the last confinement, he of course had no ground whatever for suspecting the actual state of her pelvis. The labour commenced with slow and feeble pains, which continued for twelve hours before the membranes ruptured; after this the pains became more frequent and stronger, and then at last she sent for the assistance of Mr. Richards. Finding that delivery in the usual way could not be ac-

complished, not even after craniotomy, which he had commenced, he called in Dr. Hall Davis, who, after careful examination, decided at once that nothing remained for the poor woman's chance of recovery but Cæsarean section, so great was the pelvic contraction of both inlet and outlet.

The sanction of the patient and of her friends having been obtained, it was determined, on Dr. Davis's representation of the case, as she lived near, to transfer her into one of the special wards of the Middlesex Hospital for the performance of the operation and careful subsequent nursing. The room having been brought to a proper temperature, and everything duly prepared for her reception and the operation, she was admitted at about half-past three o'clock on the morning of November 3rd. At that time she had been in labour thirty-two hours, during the greater part of which she had been retching and vomiting at intervals, and had kept next to nothing but soda-water and whisky upon her stomach. She was moaning with pain, her voice was feeble, and her pulse 70, small, weak, and compressible. The following is extracted from notes by Mr. Bigg, the house-surgeon, and Mr. McIntyre, the obstetric assistant, both of whom were unremitting in their attention to the patient:—A mixture of equal parts of chloroform and ether was used as the anæsthetic. The bladder having been emptied, and the patient lying on her back with the shoulders well raised, an incision was made along the middle line of the abdomen from a little below the umbilicus to within an inch or more of the symphysis pubis. The parietes were remarkably thin, and nothing intervened between them and the uterus. It was found necessary to enlarge the incision to expose the uterus sufficiently, and this was done by prolonging it upwards on the left of the umbilicus so as to avoid dividing the round ligament of the liver. The uterus was then opened by a straight incision extending downwards from the fundus for about four inches. During this step, and subsequently, care was taken to keep the uterine and abdominal walls in apposition, so as to avoid the descent of the intestines between them, and also to prevent the escape of anything from the cavity of the uterus into the peritoneal cavity. The left arm of the fœtus presented at the opening, and, as the uterus was tightly contracted, Mr. Morris found it necessary partly to withdraw the arm before he could seize the foot. This done, he replaced the arm and extracted the fœtus, feet first. Dr. Hall Davis now detached and removed the placenta, and ascertained that the channel leading into the vagina was free. A small quantity of blood was sponged out of the uterus, the edges of the uterine wound were brought together by three strong and two finer catgut sutures, and the wound in the abdominal wall was adjusted by means of four deep silk sutures passing through the peritoneum, and three superficial and intermediate ones. A pad of dry lint was placed over the wound; this was covered by several folds of carbolised gauze, and all was retained in place by four or five broad strips of strapping applied transversely across the abdomen. The usual flannel bandage for ovariotomy cases enveloped the abdomen. The uterus contracted immediately after the removal of its contents, so that there was no cause of delay in the operation. Very little blood was lost, and the pulse, though small and weak, was quite as good as before the anæsthetic was commenced. An enema of brandy and one-third of a grain of morphia was given immediately after the patient was placed in bed.

At 10 A.M. she had slept a little; some discharge of blood had been going on per vaginam; she had passed no urine, and there was none in the bladder. Nutritive enemata were ordered; but, the rectum being found loaded with fæces, an enema of half a pint of warm water was first injected, which brought away a small quantity of fæces. To take white wine whey, arrowroot, milk, or beef-tea, according to her fancy.—At 1.30 P.M. there was much distension of abdomen from flatus; no marked tenderness; no pain except when coughing. Can take nothing by the mouth save ice. Passed four ounces of urine voluntarily an hour ago. Pulse 88; temperature 98·8°; respiration 22. Expresses herself as feeling that she is doing well, and compares her present state thankfully with that of yesterday. O'Beirne's tube was passed to relieve the distension, but it became plugged with fæces. Another warm-water enema to be given. — 6 P.M.: Vomiting at intervals. Pulse 120; temperature 102·6°; respiration 36. Has passed urine voluntarily more than once—sixteen ounces in all. Tympanites considerable. O'Beirne's tube still becomes plugged by fæcal matter.

Nov. 4th. — 1.30 A.M.: Pulse 140; temperature 101·3°; respiration 38. Has had no long sleep. Is complaining of pain in the left iliac fossa. There is a continual feeling of nausea, but no excessive vomiting. Has taken and kept down nearly half a pint of arrowroot. Still passes urine voluntarily. To discontinue the mixture of lithia and compound tincture of cardamoms which was ordered yesterday, as it excites vomiting. At 10 A.M., pulse 148, temperature 102·6°, respiration 56. Since 6 A.M. has vomited only one ounce of bile-stained fluid, but there has been frequent retching, attended with great eructation. Eleven ounces of urine have been passed voluntarily. A somewhat offensive discharge is going on per vaginam. The abdomen is more tympanitic and distended than it was; probably this is attributable to the direct and extensive interference with the sympathetic nervous system consequent upon a wound of the uterus at full term. During the night the patient loosened the abdominal bandage and felt some relief thereby. No flatus can be withdrawn by an O'Beirne's tube, as the upper part of the rectum is still loaded with fæces; some fæces have just been extracted by means of a lithotomy scoop. The dressings of the wound were changed, as they were soaked with blood-stained serum which had oozed from the lower end of the wound. The lowest of the deep sutures of the abdominal wound was then untied and readjusted more loosely, and the lowest suture of all, a superficial one, was entirely removed. This was to allow of the escape of any pent-up fluid from the abdominal cavity, if there were any such. Only a few drops of sero-sanguineous fluid came away from the wound. There was marked dulness in the left iliac region, and a hard tumour was felt in this situation. Half an ounce of whisky and ten drops of tincture of opium in water were given by the mouth and retained. This was followed by sleep for an hour and a half. During the day, up till 9.30 P.M., she continued to retch a good deal, and vomited everything except another dose of whisky and opium, part of which she retained. The pulse, respiration, and temperature continued to rise until the pulse reached 162 and the temperature 104·8°. Then she became delirious; the temperature fell to 102·2°, the pulse, small, irregular, and compressible, was still very fast, and the respiration dropped to 16, and was very laboured. The skin was dry and pungent, and a considerable and very offensive discharge per vaginam continued during the evening and through the night, and gave rise to a most pernicious odour in the room. Her condition was now quite hopeless—indeed, she seemed for some hours moribund; the lips and tongue were dry, the breathing was short and again became rapid, the temperature returned to 104·8°, and a state of low wandering delirium continued.

Towards the morning of Nov. 5th, however, she rallied a little, and a small quantity of yellow fæces was voided at the same time as the urine. Enemata of beef-tea and egg were still administered, and were partly retained. At 1.30 P.M. the wound was examined, and clean dressing applied; there had been but little discharge from it. She was unconscious. Pulse 166, and very small; temperature 105·4°. At 2.40 death occurred, being about sixty hours after the operation. Ten minutes afterwards the temperature of the body was 104·6°.

A post-mortem examination was made twenty-four hours after death, by Dr. Coupland, and the following is abridged from his report:—Body emaciated; abdomen distended; surface generally pigmented. The distance between the iliac spines measured nine inches. In the median line of the abdomen, extending for a distance of three inches downwards from the umbilicus, there was an incision through into peritoneal cavity. The margins of the wounds showed no signs of union except along the upper half inch. The abdominal parietes were extremely thin, and through the incision, after removing the six interrupted sutures which were holding the edges together, coils of intestine were seen covered by a layer of soft puriform lymph. After reflecting the abdominal wall, the uterus was brought into view, lying partly in contact with the parietal peritoneum in the left iliac fossa, and partly covered by coils of intestine. The uterine surface and the adjacent parietal peritoneum, as well as some coils of intestine in the neighbourhood, were smeared by soft puriform lymph; but the area of peritonitis was limited to the lower part of the abdomen. The uterus, pale, flaccid, and marked by impressions of the viscera in contact with it, appeared in the left iliac fossa and left half of the hypogastric region. It was about the size of the fœtal head at full term, or larger. On its anterior surface there was a vertical incision from near the fundus to the vesico-uterine pouch; the line of incision lay almost midway between the insertions

of the Fallopian tubes. It was united by five catgut sutures, one of which (the second from the top) had become detached, so that the external edges of the wound gaped at this spot a little. On removing the sutures the cavity of the uterus presented an irregular sloughing surface. The uterine wall at the seat of incision measured one inch in thickness. The stomach, ileum, cæcum, and colon much distended with flatus; the rectum contained a quantity of yellow fæces. The bladder healthy. Lungs engorged and deeply pigmented; a few old adhesions between parietal pleura and upper part of left lung. Right heart full of black blood-clot. Left ventricle contracted and empty. Valves natural. Liver fatty, large, smooth, of a yellowish-brown colour and "dry" appearance. Spleen large and very soft, measuring six inches by three inches.

The fœtus removed at the operation was a male of full term, and weighed (after exposure for three days) 7 lb. The head had been opened by craniotomy. It measured in length 21½ in., in breadth across the shoulders 7 in., across the pelvis 4½ in., and when placed as nearly as possible in the intra-uterine posture it measured 11½ in. in length.

The pelvis exhibited the characteristics of deformity and contraction peculiar to mollities ossium supervening in adult life. There were the marked irregularity of the brim, the extreme projection forward of the sacral promontory, and the beaked projection of the pubic bones at the symphysis, with the narrow arch and the approximated ischia, which rendered vaginal examination very difficult. The available sacro-pubic diameter at the brim of the pelvis measured barely 1⅞ in.

(To be concluded.)

ON AN

IMPROVED FORCEPS FOR DEPILATION.

BY DYCE DUCKWORTH, M.D., F.R.C.P.,

ASSISTANT-PHYSICIAN TO ST. BARTHOLOMEW'S HOSPITAL; EXAMINER IN PRACTICE OF PHYSIC IN THE UNIVERSITY OF EDINBURGH.

I THINK it will be generally allowed that the practice of depilation, as commonly followed, is a tedious and often unsatisfactory procedure. It seems to me that the chief reason of this lies in the marked unsuitableness of the instrument usually employed for the purpose. The ordinary depilating forceps is small and short—barely three and a half inches in length—and one might suppose that it had been designed to meet the occasional requirements of the ophthalmic surgeon in cases of trichiasis. It is made after a French pattern, as used by M. Bazin, at l'Hôpital St. Louis, in Paris. A drawing of it is to be found in Professor McCall Anderson's book on "Parasitic Skin Diseases," p. 45. The main principles in it, so far as I can judge, consist in the squared ends of the extremities, and the absence of deeply-cut teeth in them. It acts very well if it be used to remove single hairs, but if large patches of diseased hair have to be dealt with, it is, without question, a paltry and inefficient instrument. So much so is this the case that I venture to believe the practice of depilation is often neglected altogether, or very imperfectly performed.

It has occurred to me that a more efficient instrument

might be constructed, and the object of this communication is to introduce to the profession an improved form of forceps for this purpose. I therefore devised that of which the accompanying woodcut is an exact copy, both as to size and form. In length this instrument measures five inches and a half. It is intended to be taken in the hand and held horizontally, or at a right angle, to the head of the patient. There is thus secured a great increase of power in manipulating the affected hairs, and the process of depilation can be carried on without the inevitable fatigue to the finger and thumb resulting from the use of the ordinary depilating forceps. The end is somewhat curved, or rather bent at a slight angle, and thus one or many hairs, as required, may be readily seized.

The full value of the instrument is only apparent when large patches have to be dealt with, as in the cases of widespread tinea tonsurans or tinea favosa. I find that it acts powerfully, and with great certainty. The teeth are but slightly marked, but the bite is accurate, and easily maintained by the closed hand.

No doubt can be entertained as to the value of depilation in the treatment of parasitic disease of hairy parts. I am free to confess, however, that some years ago, when I was demonstrator of skin diseases, I was careless in the efficient practice of it, and, indeed, gave it up for some time. In the tenth vol. of St. Bartholomew's Hospital Reports (1874), at p. 278, in a report upon certain skin diseases, I stated my reasons for this. But I have since had reason to change my opinion, and I think those who have much to do with ringworm will bear testimony as to the value of careful depilation in hastening a cure in many instances.

So far as I know, the application of Coster's paste (one drachm of iodine dissolved in one fluid ounce of oil of tar) to the affected patches is the best preliminary treatment to depilation, and the pain attendant upon the process seems to be diminished by this parasiticide.

Certainly, with the forceps here described, there will in future be less objection to the practice than there may have been hitherto.

Messrs. Arnold and Son, of Smithfield, have carefully manufactured this instrument at my suggestion.

Grafton-street, Piccadilly.

THE ARTIFICIAL PRODUCTION OF HUMAN DISEASES IN THE LOWER ANIMALS.

BY W. LAUDER LINDSAY, M.D., F.R.S.E.,

PHYSICIAN TO THE MURRAY ROYAL INSTITUTION, PERTH.

(Continued from p. 456.)

TUBERCULOSIS, in some of its many forms, has not only been artificially produced by the experimental pathologist in a variety of ways, but it is constantly being manufactured, so to speak, by the ignorance and thoughtlessness of those who are concerned in (1) the husbanding of cattle, (2) the custody of pet animals, and (3) the exhibition of wild animals in menageries or zoological gardens.

It is thus producible like so many other serious disorders of the lower animals—disorders that inevitably affect on the large scale the welfare of man—both (1) intentionally, for experimental purposes on the small scale, and (2) unintentionally or ignorantly, by the keepers of dairies, stables, house pets, and menageries, on the large scale.

Among the modes by which tuberculosis has been artificially produced in the lower animals are the following:—1. By inoculation with tubercular matter (*a*) from the human lung, (*b*) from the cow, (*c*) from rabbits. 2. By inoculation with the sputa and blood of human phthisical patients. 3. By inoculation with non-tubercular matter. 4. By the use of various merely mechanical irritants, such as setons. 5. By feeding on tubercular matter (*a*) from man, (*b*) from phthisical cows. 6. By feeding on the milk and flesh of phthisical or tuberculous cows or oxen. 7. By the inhalation of dried, expectorated tubercular matter reduced to fine powder. 8. By long confinement of cows in badly constructed byres—that is, deficient in warmth, dryness, light, ventilation, and cleanliness. 9. By subjecting the same animals to excessive and prolonged lactation. 10. By in-and-in breeding of farm stock. 11. By exposing in our menageries wild animals, accustomed to warm climates and forest freedom and food, to such unnatural and pernicious

influences as (*a*) cold, (*b*) sudden changes of temperature, (*c*) repression of freedom of action, including (*d*) defective exercise and the (*e*) non-gratification of the sexual or other instincts, along with (*f*) improper food and drink. 12. By subjecting our house pets of all kinds to similar malign influences, including in addition (*a*) excess or deficiency of food and drink.

The animals in whom tuberculosis is producible by man, by some of the means above mentioned, include a considerable number of genera and species, represented by—1. Monkeys and other Quadrumana. 2. Dairy and other cattle, and the pig, goat, and sheep, among the Ungulata (or Ruminantia). 3. Rabbits and guinea-pigs, among the Rodentia. Klebs describes them as "very susceptible to the artificial production" of tubercle.[1] Burdon-Sanderson's experiments also showed that the Rodentia are easily affected with tubercle artificially inoculated, while other families of animals were unaffected. 4. Dogs and cats, among the Carnivora. 5. The porpoise, among the Cetacea.

Moreover, "animals of widely different species, and naturally not at all disposed to the disease, can be infected in the most serious manner."[2] Curiously enough, however, tuberculosis is "all but unknown" in the horse,[3] and probably in certain other animals.

The forms in which tuberculosis is artificially developed in the animals, and under the conditions or by the means, above enumerated, include the following tubercular affections of most of the internal organs: (1) Miliary or other forms of tubercle in the lungs and pleuræ, including especially phthisis, the "consumption" of popular writers; (2) tubercular deposits in, or degeneration and inflammation of, the peritoneum, intestines, especially the ileum,[4] the follicles of the small intestines generally, and the mesenteric glands, including especially tabes mesenterica; (3) a similar condition of the spleen, liver, or kidneys; as well as of (4) the superficial (lymphatic) glands, including the larynx, arytenoid cartilages, and cervical, prepectoral, and bronchial glands; and (5) even the muscles, all just as in man.

Moreover, constitutional scrofula—the tubercular diathesis—is produced, and this diathesis is unfortunately, like so many other diseases both in other animals and man, hereditarily transmissible. So that deteriorated and deteriorating races or breeds of dairy cows, for instance, are constantly being manufactured by ignorant men. This heredity is observed, in oxen, chiefly in connexion with a development in them of the lymphatic temperament.[4] Professor Chaveau, of Lyons, drew attention to the predominance of glandular over other forms of tuberculosis in young animals.[5] In animals, as in man, in fact, tuberculosis "has a manifest affinity for the lymphatic glandular system."[6] Hence we find experimentalists, veterinarian or medical, describing as among the organs which become the seat of artificially produced tubercular lesions the bronchial and prepectoral glands (Villemin); mesaraic and epigastric glands (Böllinger); intestinal, cervical, superficial (cutaneous), and other glands.

Of the instances or illustrations of the forms in which tuberculosis is artificially produced in the lower animals, none is perhaps of higher interest to man than its origin in the use of contaminated milk—of the milk of phthisical cows;[7] because such generation of tuberculosis is not confined to the lower animals, but extends also, and probably on a scale of which at present we have no adequate idea, to the human infant. To this source, indeed—the use of the milk of phthisical cows—I believe a considerable proportion of infantile mortality in our large towns is attributable. Klebs, for instance, artificially produced tuberculosis by the milk of diseased animals: in the dog by the milk of cows in the last stage of phthisis. He found the serum of the milk quite as infectious as the milk itself.[8] He concludes from his experiments that what he calls "the virus of tuberculosis" is present in the milk of phthisical cows, as well—and this is all-important—as in that of human mothers or nurses who are phthisical. The dangerousness of phthisical milk does not arise solely from its infective property, however, but also from its deficiency in the nutrient materials of healthy milk. Hence the liability of such milk to produce diarrhœa in the human infant.[9] Zürn, of Jena, produced tuberculosis in pigs by feeding them with the milk of a phthisical cow. In the hands of Böllinger also, the ingestion of the milk of tuberculous cows was successful in the artificial production of tuberculosis in pigs and rabbits.[10]

Perhaps not second in importance to milk is the meat (or flesh) of phthisical animals as a means of producing tuberculosis—general or localised—in other animals feeding on it. The danger to man himself is quite as great from the use of phthisical ox flesh as of phthisical cow's milk. Böllinger, of Zurich, produced tuberculosis in the pig by the ingestion of the flesh of phthisical oxen, and this whether their phthisis had occurred naturally or had been generated experimentally.[11]

The extent to which tubercular milk or meat is likely to contaminate the system, whether of man or other animals, may be measured so far by the ascertained prevalence of phthisis and other forms of scrofulous[12] disease in dairy cows in London and other large cities. "It is certain," says Fleming, "that tuberculosis is a common and a very destructive disease among dairy cattle, especially and more particularly those in towns," and "that the udder.....is one of the glands not infrequently involved."[13]..... "A very large proportion of the cows which have been kept for any length of time in badly-constructed sheds, and milked freely, are more or less diseased"[14]—that is, tuberculous. In France, Cruzel, of Grenade-sur-Garonne, represents half the oxen slaughtered for food as having tuberculous lungs.[14] In Mexico "about 34 per cent. of the cattle slaughtered for food are tuberculous."[15] Professor Schüppel, who occupies the chair of Pathological Anatomy and General Pathology in the University of Tübingen, also tells us that "cows that have been kept in dairies for any length of time are nearly always phthisical."[16]

Before leaving this important subject of tuberculosis in man and other animals, there are certain general questions that are well worthy of the gravest consideration.

1. The predisposing causes of phthisis or other scrofulous disorders are the same in certain other animals as in man. These include dampness of dwellings; defective lighting, warming, and ventilation of byres or sheds; sudden checks to cutaneous transpiration; unsuitable food; excessive and long-continued lactation.[17]

2. Among the exciting causes one of the most important, practically, is contagiousness by cohabitation—by contiguity of cows, for instance, in the same byre—which has been pointed out by Dupont, of Bordeaux; Grad, of Wasselonne (Alsace), Cruzel, and Viseur. Grad gives a case of six cattle successively affected by occupying the same contaminated stall; in this case presumably by ingestion of the expectorated matter of their diseased predecessors. The stall was destroyed and reconstructed, and, as a result, tuberculosis disappeared. Grad, too, points out that disinfection of the stalls occupied by diseased cattle prevents the spread of the disease.[18] But in other cases, where healthy and diseased animals are associated, the inhalation by the one of the air expired by the other may be the mode by which the poison gains access to the system, and contaminates it.[19] Contagiousness by cohabitation is much more common in man than is generally supposed; and by cohabitation, not only with phthisical human invalids—for instance, by sleeping in the same bed with them,—but with phthisical animals. Thus we are told of the death of a well-known chimpanzee, "Joe," in the Zoological Gardens, London, from phthisis, and the communication of the disease to its keeper, Sutton.[20]

3. The causation of phthisis in the lower animals, especially in the cow, is eloquent in its lessons concerning the etiology of the same prevalent disease in man. Man is constantly manufacturing phthisis in himself or his children

[1] Fleming: Tuberculosis, p. 435.
[2] Review of Williams's "Veterinary Medicine," Brit. and For. Med.-Chir. Review, April, 1875, pp. 425-6.
[3] Constituting thereon an eruption, discrete or confluent.
[4] The Transmissibility of Tuberculosis. By George Fleming, Veterinary Surgeon-general of the Royal Engineers. Brit. and For. Med.-Chir. Review, Oct. 1874, p. 464. [5] Ibid., p. 478. [6] Ibid., p. 476.
[7] A parallel case is the communication of the foot-and-mouth disease of cows to herd boys and girls that use their milk; of which instances were given in the British Medical Journal of Jan. 1st and 8th, 1876, pp. 26 and 51.
[8] Brit. and For. Med.-Chir. Rev., Jan., 1874, p. 255.
[9] Fleming on the Transmissibility of Tuberculosis, p. 486.
[10] Ibid., p. 484. [11] Ibid., p. 493.
[12] According to Böllinger, "scrofula and tuberculosis are only two forms of the same disease at different periods of development."—Fleming: Tuberculosis, p. 435.
[13] Fleming: Tuberculosis, p. 436. [14] Ibid., p. 462.
[15] Brit. and For. Medico-Chirurgical Review, April, 1875, p. 425.
[16] Fleming: Tuberculosis, p. 464. [17] Ibid., p. 464.
[18] Ibid., p. 469. [19] Ibid., p. 465.
[20] Daily Telegraph, March 25th, 1874.

by subjecting them to some of the insanitary conditions above specified.

4. The phthisis of the cow is, in other respects, the same as that of man. Schüppel, "who has made an almost exhaustive study of tubercle in general, and particularly that of the bovine species . . . . has fully established (in 1874) the absolute identity in structure and development of the cattle disease (known as 'Perlsucht') with tubercle in man."[21] Villemin, too, considers bovine identical with human phthisis.[22]

5. Marasmus, or "pining," a progressive emaciation and debility, occurs in all phthisical animals, however the tuberculosis has been produced.[23] According to Pierquin, it is a common cause of death in menagerie animals, and it is fatal in the cat and dog, sometimes as a sequel or result of nostalgia. In Scotland, phthisical cattle in the last stage of the disease are termed "piners."[24] This same marasmus—a gradual loss of flesh, strength, and spirits—usually attended with anorexia and self-starvation, is very common in the dog, cat, or other house pet, as the result of sudden and sore grief, a subject on which I have dwelt elsewhere. It is also a common cause of death in the human insane,[25] and Pierquin mentions fatal marasmus from dirt-eating among the Orinoco Indians of South America.

It does not appear to have been determined whether and how far there is any difference in the infective properties of cooked and uncooked meat and milk. It may prove that thorough cooking, roasting the one and boiling the other, may practically destroy all risk of infection. But Böllinger, in his experiments, showed that cooked tubercle at least was capable of producing tuberculosis in rabbits.

That fresh tubercle, when fed upon, begets tuberculosis in the feeder has been abundantly proved by the experiments of Chaveau, Böllinger, and others. Chaveau produced it in healthy calves by feeding them with tuberculous matter from an old phthisical cow,[26] and he showed that cattle can be infected by the ingestion of human tubercle.[27] He also noticed the infection of certain healthy calves—that were kept for the purpose of comparison with others that were the subjects of experiment—by using the same buckets for eating and drinking from; in other words, by the reception into the digestive canal of contaminated food or water.[28] Böllinger, too, set up tuberculosis, including tubercular peritonitis, in the goat by ingestion from the ox.[29] "A goat fed with tuberculous ox-lung became cachectic and died," with miliary tubercle in the lungs, as well as with miliary tuberculosis of the mesaraic and epigastric glands, and tubercles in the peritoneum and epiploon.[30] A sheep fed with tuberculous ox-lung showed isolated tubercles in its own lungs and peritoneum. Böllinger found that different results were obtained in carnivorous and herbivorous animals. In the latter, the ingestion of fresh tuberculous matter produces "intense tuberculous infection." Viseur, of Arras, artificially tuberculised cats by feeding them on tuberculous matter, and St. Cyr, of Lyons, has likewise "proved the transmissibility of the disease by the stomach."[31]

The same sort of tubercle, when inoculated in various parts of the body, gives rise to the same effect as when fed upon. Böllinger produced tuberculosis in the dog by inoculation from man, and in goats by inoculation from the ox. Professor Villemin, of the Val de Grace Hospital, Paris, who was the first to show the transmissibility of tuberculosis by inoculation in rabbits and guinea-pigs, the matter used being taken from the human lung,[32] successfully inoculated rabbits with tubercular matter from the cow,[33] and rabbits with tubercular matter from each other. His experiments or their results were verified also in guinea-pigs, among others, by Burdon-Sanderson and Wilson Fox, who showed, however, that the same effect could be artificially produced by inoculation with certain non-tubercular matters, or even by means of setons.[34] Demetrius Paraskera and Zallonis, at Syra (Greece), inoculated rabbits with the sputa and blood of human phthisical patients. But they went much further—further than could be ventured upon in this country—further, perhaps, than could be justified by either ethics or pathology; they inoculated man himself, with the same too successful result, by means of sputa "from a man who had abscesses in his lungs."[35] Man is constantly—in his ignorance and stupidity, prejudice, and perversity—making experiments, only too successful, on himself in the manufacture of disease of all kinds and on the large scale. But it is not often he does it in this direct and deliberate way; though "martyrs to science" are every now and then appearing, who make themselves *corpora vilia*—reduce themselves to the level of "lower" animals, for the purposes of scientific experiment. The general evidence of experimentalists shows that "inoculation with the tubercles produced experimentally reproduces tuberculosis as readily as if human tubercle had been employed."[36]

Tubercular matter, then, contaminates the system by digestion in the stomach. It does so also by pulmonary inhalation, though the former mode of infection—viz., ingestion—is, according to Chaveau, "incomparably more frequent than contagion by the respiratory passages."[37] According to Villemin, dried expectorated tubercular matter, reduced to powder and carried by the air into the lungs, is probably a source of infection in man himself. And "veterinary surgeons have for many years believed that forage soiled by the expectorations of the disease.....will communicate the malady"[38]—tuberculosis or phthisis.

Stephens, in his "Book of the Farm," tells us that "in-and-in breeding produces a liability to catarrhal affections and to consumption, the whole constitution being much weakened." Pierquin points out, on the other hand, that from cross-breeding of an unsuitable kind various difficulties and dangers in parturition arise.

(To be continued.)

RARE CASE OF HERNIA.

By ALEX. PATTERSON, M.D.,

SURGEON TO THE WESTERN INFIRMARY, GLASGOW, AND LECTURER ON CLINICAL SURGERY.

W. H——, labourer, aged thirty-five, was admitted to the Western Infirmary on Feb. 10th, 1878, at 8 P.M. The patient stated that, when a boy, he suffered from hydrocele, for which he was several times tapped. A number of years ago the hydrocele gave place to a rupture, which, he thinks, was caused by a "stress." The latter came down and went up, but was not attended by any serious inconvenience until the day of admission. That day, when at work, about noon, he was seized with severe pain in the right groin, spreading up towards the navel, and obliging him to desist from his occupation. He walked home a distance of two miles, on reaching which a medical man was called in, who tried ineffectually to return the contents of the swelling.

On admission he presented an extremely pinched and anxious aspect of countenance; the face was pale, the cheek wanting the sublivid flush so frequently observable in cases of strangled intestine. The pulse was 100, regular, and moderate in volume, not wiry. The man complained of great pain, chiefly situated in the tumour, which was a large, firm, tense, hourglass-shaped mass, occupying the right side of the scrotum, and extending upwards into the inguinal canal. The contraction existed at the junction of the upper and middle third of the protrusion. No vomiting had taken place, nor had there been any retching or hiccough. The abdomen was not distended, nor did pressure produce pain.

At 10 P.M., two hours after admission, chloroform was administered and herniotomy proceeded with under antiseptic precautions. On the sac being opened, a large quantity of blood-stained serum escaped, and the omentum, with veins much distended, came into view. The operator endeavoured to get behind the omentum, in the expectation of finding the bowel in its usual position, but was unable to do so until he had enlarged the wound downwards along the scrotum, and come upon the narrowed part of the hernia, where the strangulation really existed. At this point two flaps or wings of thickened omentum, apparently surrounded or grasped, as a crab's claw might do, a fold of small intestine about six inches in length. The knuckle of bowel was very tightly strangled, and almost *verging on gangrene;*

---

[21] Fleming: Tuberculosis, p. 463.
[22] Ibid., p. 471. [23] Ibid., p. 470. [24] Ibid., p. 462.
[25] Report on "Insanity and Insane Asylums," by Commissioner Wilkins, Sacramento, California, 1872; appendix, p. 233.
[26] Fleming's Tuberculosis, p. 478. [27] Ibid., p. 481.
[28] Brit. and For. Med.-Chirurg. Review, January, 1874, p. 255.
[29] Fleming's Tuberculosis, p. 483.
[30] Gazette Médicale de Paris of November 22nd, 1873, as quoted in Brit. and For. Med.-Chirurg. Review, January, 1874, p. 255.
[31] Fleming's Tuberculosis, p. 485.
[32] Ibid., p. 470. [33] Ibid., p. 471. [34] Ibid., p. 472.
[35] Ibid., p. 473. [36] Ibid., p. 476. [37] Ibid., p. 481. [38] Ibid., p. 486.

it presented much the appearance of maroon-coloured velvet. The stricture was relieved, and the gut very cautiously returned into the abdominal cavity, while the omentum, which was held in position by old adhesions, was allowed to remain. The case progressed favourably and without a single untoward symptom. No medicine of any kind was administered, and the patient was dismissed well on the 22nd February.

Remarks.—This case was unusual in three points—viz., (1) the entire absence of vomiting, retching, and hiccough is extremely uncommon; (2) the hour-glass shape of tumour is occasionally met with in hydrocele, but rarely in protrusion of intestine; (3) the almost gangrenous state of the intestine occurred in ten hours, much earlier than we are accustomed to meet with it in inguinal rupture.

Gastrotomy I have twice performed, and have operated for strangulated hernia seventy-one times, and never before encountered a case similar to that just detailed.

Glasgow.

A Mirror of HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

CASES OF INJURY TO THORACIC AND ABDOMINAL VISCERA.

(Under the care of Mr. BRYANT.)

Punctured Wound of Abdomen and Thorax; Wound of Lungs; Pleuritic Effusion; Relieved. — (For the following notes we are indebted to Mr. T. W. Fuller.) John B——, a waiter, aged thirty-three, was admitted into the Accident ward on the 18th September, with an oblique gaping wound, about an inch long, somewhat to the right of, and slightly above, the ensiform cartilage. There was a good deal of hæmorrhage from the wound, and it was stated that flatus and fæcal matter had passed out of it. The man alleged that he had been stabbed by a Russian with a clasped knife. He had himself but recently left a lunatic asylum.

On admission, he was collapsed, vomited a great deal, and had a severe cough and brought up some blood; his breathing was very laboured, the movement of the right side of the chest being very slight. Temperature 100·4°; pulse 100; respiration 24. He was ordered one grain of opium every four hours.

On the 19th he had revived and was quite sensible. He was able to keep down milk, and he coughed much less. Temperature 100°; pulse 96. On the 20th his motions were normal; urine slightly high coloured. Temperature 99·3°; pulse 108. On the 21st the front of his left chest was hyper-resonant and the back dull. This hyper-resonance changed with the position of the body. Fluid was present also, and there was abdominal distension and pain. On the 24th the expectoration was not so constant, but still streaked with blood. On the 25th he was delirious.

Sept. 26th. — He was extremely delirious through the night. Still continues to cough, but not so persistently. Temperature 100·2°; pulse 90. Opium continued.

28th.—During the night he had slight spasms, and passed his motions and water involuntarily whilst under the influence of opium. The cough still remains hard and without much expectoration. Breathing causes pain; respiration 30, hurried; pulse 90; temperature 100°. Patient less delirious.

On Oct. 6th the right side moved less than the left on deep inspiration. Resonance was fair over both lungs. There was some dulness over the right axilla and right lung posteriorly. Good vesicular murmur over left side anteriorly and posteriorly, deficient over right side posteriorly. He complained of general muscular twitchings. No albumen in urine. Temperature 100·6°; pulse 96. On the 12th he was better. The respiration was improved; the chest walls moved better. On the 15th he had a severe attack of rheumatism in hand and left knee. He also had a discharge of pus from wound. A blister was placed on the right side of chest. On the 24th he had passed a bad night, and was sweating a great deal. Respiration 24. He did not care for his food and vomited his medicine. On the 26th nausea still continued, although he seemed better. Temperature 101·4°; pulse 108. On the 27th he was much improved, and the following day vomiting had ceased. On Nov. 6th Dr. Fagge reported that he did not think there was any serious injury to chest; the dulness was not extreme. Tactile vibration was present. The respiratory murmur, although deficient, was not altogether absent. There was no alteration of vocal resonance; probably some pleurisy had been present, which was getting well, or possibly a thin layer of blood may have extravasated there. On the 11th the patient was much worse, sweating much. There was also pain over right side of the head and shoulder; rheumatic pains in hand. Nausea was also present; later in the day he vomited, and was very ill. Vomiting ceased next day, and he was better. On the 20th rheumatism had been troubling him again, but was fast subsiding. Some exuberant granulations of wound were touched with nitrate of silver, and again three days later. On the 30th the wound had nearly healed. The patient from this date gradually improved, and, although he was troubled with night-sweats and occasional attacks of rheumatism, he was able to leave the hospital on the 20th December.

Ruptured Kidney; Hæmaturia six days; Recovery.—(For the following we are indebted to Mr. T. W. Fuller.)—R. S——, a labourer, aged twenty-five, was admitted into Accident ward on the 7th November, 1877. He was unable to give any clear account of the accident, having probably been drunk at the time. He stated that he fell off his van, alighting on his head and right shoulder, and striking his right loin against the wheel of the van. When admitted into the surgery he declared there was nothing the matter with him, and left the hospital, but subsequently returned because he was apparently passing blood in his urine. The water was drawn off, and found to be extremely dark. He had pain over his right lumbar region and right shoulder. The urine contained a great quantity of phosphates as well as blood. A three-grain lead and opium pill was ordered, and milk and ice.

Two days later he was free from pain in his back, but still passed urine coloured with blood.

On Nov. 12th the urine still contained blood. He was ordered twenty drops of extract of ergot and ten drops of tincture of opium in one ounce of peppermint-water three times a day; to have a one-grain opium pill at night. Next day the amount of blood in the urine was less, but that of the phosphates was larger. On the 19th, fish diet was allowed. On the 29th he was up in the ward, and on the following day he left the hospital well.

MANCHESTER ROYAL INFIRMARY.

NOTES OF A CASE OF INTESTINAL OBSTRUCTION TREATED BY ABDOMINAL SECTION.

(Under the care of Dr. WILKINSON and Mr. BRADLEY.)

FOR these interesting notes we are indebted to MR. F. A. Southam, M.B., F.R.C.S., house-physician.

James C——, aged forty-five years, mechanic, a strong, healthy man, was admitted at noon on Feb. 17th, suffering from symptoms of intestinal obstruction. He stated that while at work on the morning of Feb. 14th, he felt something suddenly "go wrong inside," and was seized with acute pain in the lower part of the abdomen. He remained at work till evening, though suffering acutely all day. As the pain continued, and vomiting came on, the next morning he called in a medical man, who from that time until his admission treated him with enemata and fomentations. In spite of this the pain and sickness continued, and there was complete constipation.

On admission, there were no urgent symptoms or signs of prostration or collapse. The abdomen was somewhat distended and tympanitic, but no tumour or unnatural fulness could be felt. There was slight tenderness on pressure over the umbilicus, to which point all the pain, though not severe, was referred. No tenesmus existed, nor was there a history of any hæmorrhage from the bowel. Sickness continued,

though not to any great degree. On examining the inguinal canals for hernia, the patient stated that he had had a rupture on the left side for many years, but had never worn a truss, as the bowel always went back easily, and had never caused him any inconvenience; did not connect his present symptom with the rupture. On the left side the testis had not descended into the scrotum, but there was an unnatural fulness about its upper part, just below the external ring. This, however, was not produced by bowel, as the finger could be readily passed beyond it along the inguinal canal, and through an abnormally large internal ring, which was entirely free from intestine, into the abdomen. The inguinal canal on the right side was carefully explored, as also both femoral fossæ, but no signs of any hernia could be discovered, nor was pain on pressure produced in any of these regions.

The previous good health of the patient, the sudden onset of his illness following some effort, the uniform distension of the abdomen, the pain referred to the umbilicus, the absence of any tumour, the vomiting and constipation which had lasted three days, all pointed to some internal obstruction. The absence of tenesmus, passage of bloody mucus stools, or tumour, were against intussusception; while the absence of any symptoms of collapse, the very slight constitutional disturbance, the character of the vomited matter, which as yet had not become stercoraceous, and the fact that the urine was not scanty or suppressed, seemed to indicate that the obstruction, to whatever cause it was due, was situated low down in the course of the intestine. Opium was accordingly administered internally; warm fomentations were applied to the abdomen, food was given in very small quantity, and a simple enema, about two pints, was at once employed, and brought away some very small particles of fæcal matter and a little mucus, but no blood. At 9 P.M. the temperature was 99·4° F.; pulse 100, strong and regular. Had not been sick at all since admission. Felt easy, and had very little pain. Took some milk, soda-water, beef-jelly, ice. He passed a good night, and slept well. Next morning the temperature was 99·6°; pulse 104. There was no sickness all day; had very little pain. An enema in the morning brought away a little clay-coloured fæcal matter.

On the 19th the temperature was 99°; pulse 100, full and strong. Was sick, after taking a little milk at early morning, for the first time since admission, the vomited matter consisting merely of the contents of the stomach. During the day stercoraceous vomiting commenced, and occurred several times. At 9 P.M. the abdomen was more distended and tympanitic; the man complained of severe pain referred to umbilicus. An enema, about one pint, containing half an ounce of turpentine, was given at 8 o'clock, and relieved the pain and tympanites, but brought away no fæcal matter. Opium and fomentations continued.

On the 20th the temperature was 98·6°; pulse 100, full and regular. Had passed a good night, sleeping well; only sick once. Felt easy, and had very little pain; no hiccough; the expression was calm, and there were few signs of constitutional disturbance. At 3 P.M., as the stercoraceous vomiting still continued, three pints of warm water were injected into the bowel with the long tube. This was retained for a short time, and came away quite clear. At 9 P.M. the temperature was 99·4°; pulse 120. Vomiting still continued from time to time, of a decidedly fæcal character. There was very little uneasiness; no hiccough or signs of collapse. On account of the sickness, the internal administration of opium was discontinued, and morphia henceforth given subcutaneously.

On the 21st, temperature 99·6°; pulse 124, strong and regular. Had passed a fair night, with very little sickness. Very little pain or discomfort. No increase in the tympanites or abdominal distension. Expression calm; skin moist and perspiring freely. No hiccough or signs of collapse; very little constitutional disturbance. At noon, as the stercoraceous vomiting still continued, a consultation was held, at which it was determined to explore the inguinal canal on the left side, the seat of the old hernia, and if any evidence of internal strangulation could be detected, to prolong the incision upwards into the abdomen. In the meantime, it was recommended, as a last resource, to try the effects of a soda-water enema, with a view of possibly reducing the strangulation if situated low down in the course of the bowel. A tube was accordingly passed for about eighteen inches up the large intestine, and an ordinary syphon of soda-water having been connected with it, its contents were gradually allowed to pass into the bowel. This, however, while causing little discomfort, gave no relief to the symptoms, the water coming away quite clear and free from blood or fæcal matter. At 6 P.M. an operation was performed by Mr. Bradley. An incision about three inches in length was made in the external ring on the left side, and the tissues were divided on a director till the wall of the hernial sac was reached. This, however, was not opened, as the inguinal canal and internal ring were both found to be perfectly free from intestine; the peculiar fulness noticed before the operation just below the external ring was found to be caused by the remains of the atrophied and imperfectly developed testis. The question of opening up the abdomen was then considered, but it was decided to defer it for the present, and, the incision having been closed, the patient was removed to bed. At 9 P.M., temperature 99·4°; pulse 134; respiration 28; he felt easy; had been sick twice since operation.

On the 22nd, temperature 101·4°; pulse 140, strong and regular; respiration 26. Had passed a fair night; was sick several times. At noon a consultation was held, and as there was no abatement in the symptoms, the stercoraceous vomiting still continuing, and it was evident that the case was one of internal strangulation, and the patient must die if left unrelieved, it was determined to perform abdominal section.

The operation was performed by Mr. Bradley, assisted by Mr. Heath and Mr. Lund. An incision about four inches in length having been made midway between the pubes and umbilicus, the peritoneal cavity was opened to the same extent. Mr. Bradley then introduced his hand into the abdomen, but being unable to find any constriction, the incision was enlarged and the intestines carefully drawn out and examined, being protected with warm sponges and flannels, till the strangulation was found. This was situated at the internal ring on the right side, a small portion of small intestine, about the size of a chesnut, and involving only about one-third of the circumference of the bowel, having passed into and being firmly constricted by the internal ring. This was readily withdrawn on a little gentle traction, and the intestines having been replaced, the abdominal incision was closed with sutures. The strangulated portion was considerably congested, the line of constriction being marked by a slight groove on the serous surface of the bowel. The intestine for some distance above and below the constriction also showed signs of congestion, but was perfectly bright and glistening, there being very little sign of any peritonitis.

At 1.45 P.M., temperature 99·4° (two degrees less than in morning); pulse 136, full and regular; quite conscious and recovered from the effects of the chloroform, and felt easy. Half a grain of morphia was given subcutaneously. At 9 P.M. became very restless. Temperature 102·4°; pulse 130; respiration 28. Cold, clammy perspiration on face and body. Had not been sick since the operation. One quarter of a grain of morphia was given subcutaneously. At 10.30 P.M. all at once he began to complain of a feeling of oppression, groaning heavily, and desiring to be raised in bed. There was a cold, clammy sweat on the body, but no other symptom. Before assistance could be summoned he died very suddenly, having vomited about three ounces of fæcal matter immediately before death.

Post-mortem examination twelve hours after death (by Dr. Ross, Pathologist).—Only a small additional opening was made in the abdominal cavity, as permission to make a thorough post-mortem was refused. The small intestines were adherent to each other by loose and recent lymph, and they were much congested. The right inguinal canal was dilated to the diameter of a quill, and a tube about the diameter of a goose-quill was passed readily through it. A portion of the small intestine was found in the pelvic cavity, which was more congested than the other parts of the bowel. On the anterior edge of this portion a spot about the size of a florin was surrounded by a ring of depressed tissue, as if it had been tied with a tight string. There was no band around this portion, and the bowel was lying free in the abdomen.

Remarks by Mr. BRADLEY.—Both the history and symptoms in this case strongly pointed to internal hernia, and certainly justified the operation of laparotomy. It is, perhaps, to be regretted that the operation was not undertaken at an earlier period, since it is a fair presumption that, inasmuch as the immediate object of operating was successfully and easily attained, the speedily following death from shock might thus perchance have been averted.

LEEDS INFIRMARY.

ABSCESS OF THE LIVER.

(Under the care of Dr. EDDISON.)

THE following notes, for which we are indebted to Mr. E. H. Jacob, M.B., house-physician, should be read in conjunction with those from the same infirmary published in the "Mirror" on March 16th.

J. G——, aged fifty-nine, labourer, was admitted on Jan. 16th, 1878. He had always been healthy and no history of any previous disease could be obtained. Eighteen months previous he began to lose flesh and strength, and coughed occasionally, having slight pain in the chest accompanying the cough, and a little bronchial mucous expectoration. On the 26th of December last, on waking in the morning, he was seized with great pain in the left hypochondrium. He then noticed a projecting tumour in the epigastrium, which he had not observed before. This, however, gave him no pain, but produced slight uneasiness if he lay upon it. His appetite was good, there was no pain after food, no vomiting, passage of blood, or hæmorrhoids.

On admission he was emaciated and rather pale. There were some bronchial and moist râles audible in the lungs, with very slight decrease of resonance at the right apex. The arteries were tortuous, but fairly soft. There was no abnormal retardation of any pulses. In the epigastrium, a little above and to the left of the umbilicus, there was a prominent rounded tumour, about three by four inches in size, with pulsation strong and, to a certain extent, distensile, but much more marked in an upward direction. It was slightly resonant on percussion, and felt hard and elastic, and was somewhat movable. On the right side there was dulness below the ribs for about three inches in the right nipple line, the line of dulness extending obliquely upwards to a point three inches to the left of the ensiform cartilage, touching the tumour for about two inches. There was no bruit heard over the tumour. Temperature was normal. Urine 1020, acid; no albumen.

On Jan. 29th there was rather more resonance on percussion over the tumour. Morning temperature, 100°; evening, 101·6°.

On the 31st he complained in the morning of pain in the region of the tumour, but had no rigors. The pain was relieved by a poultice. Temperature 98°. At 4 P.M. he was in a state of collapse, complaining of pain. Pulse 150; respiration 40, both abdominal and thoracic. He lay on his back with the legs drawn up. He sweated profusely. There was no distension of abdomen, but some tenderness over the tumour. The face was flushed and anxious. Temperature 101·6°. Next day he was rather better. Temperature in the morning, 98°; evening, 97·6°.

On Feb. 2nd he was very feeble; had no sleep during the night. The bowels were open, motions loose and yellow. Tongue coated, but moist. Appetite very bad. Temperature in morning, 99°; evening, 100°.

On the 3rd the tumour could hardly be felt, but there was much sense of resistance on percussion over the whole of the upper part of the abdomen. Temperature in the morning, 99°; evening, 100°. Tongue dry and brown.

On Feb. 4th fifty-two ounces of urine were drawn off by catheter; alkaline, 1014, with a trace of albumen. He had passed beside this about a pint in the last twenty-four hours. He was in much the same state, very feeble, and could hardly speak. He gradually sank, and died at 3 A.M. on the 5th, his temperature being 102·4° F. on the preceding evening.

Autopsy, thirty-three hours after death.—Body much emaciated. Abdomen slightly distended. On opening the abdomen, the liver was found to project three inches below the edge of the ribs, partly covered by the colon. There was general adhesive peritonitis, with a few ounces of glairy fluid effusion. On reflecting the great omentum, a large abscess was found, causing a considerable projection from the lower edge of the left lobe of the liver. There was a small opening, half an inch in diameter, by which it communicated with the peritoneal cavity, partly closed by the adhesion of the omentum. The liver was generally enlarged; substance flabby. There were numerous abscesses scattered throughout the organ, varying in size from that of a walnut to an orange. The larger one above mentioned contained about four ounces of pus stained with bile; the others, thick, creamy, sweet pus. The gall-bladder was contracted, and contained only a mass of gall-stones. The stomach was distended and flabby; intestines healthy. The kidneys were large and soft. The heart-substance was flabby; right side rather dilated; valves healthy. There were adhesions in both pleuræ; old in the left, recent in the right. The right lung was covered at the base with a thick layer of recent lymph, at a point corresponding to a projecting abscess from the liver, but with no communication between them. The lung was studded with caseous masses, pretty equally distributed, in many places beginning to break down. The left lung was much congested, and contained a few large patches of caseous degeneration.

Remarks.—The origin of the hepatic abscess is very obscure. There was no history of residence in the tropics. None of the abscess cavities had any signs of hydatid deposit, nor was there any history of an accident, or of great intemperance. It is possible that the irritation of the gall-stones might have caused the first and larger abscess, the others being of a pyæmic nature.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Lymphadenoma and Leukæmia.—Pernicious Anæmia.

THE ordinary meeting of this Society was held on the 2nd inst., Dr. Murchison in the chair. The subject of lymphadenoma was again under discussion, several microscopical preparations being shown by Dr. Goodhart, Dr. Turner, Dr. Whipham, Dr. Hoggan, and others. The cognate subject of pernicious anæmia was introduced in a case by Dr. Dickinson and Sir W. Gull, who also briefly discussed the general question.

Mr. NUNN showed a series of four microscopical preparations illustrative of the Invasion of Lymphatic Glands by Cancer. The specimens were from cases of sarcoma and carcinoma, and seemed to show a conversion of the lymphatic elements into the larger cancer cells.

Dr. RIDGE JONES exhibited specimens and microscopical Preparations from a case of Hyperplasia of the Axillary Glands with Leukæmia. The patient was a gentleman fifty years of age. One sister had died from phthisis, but otherwise the family history was good. He had been healthy since the age of five years. Had never had syphilis. In the autumn of 1866 he noticed a small swelling in the axilla, which suppurated at the end of the year. In March, 1877, he had eczema of face and lower limbs, and suffered from severe dyspeptic symptoms with diarrhœa. There were enlarged glands in one axilla, and also in the supraclavicular region. Seen in July by Dr. Jones, he had all the appearance of suffering from malignant disease; in the axilla was a swelling the size of a Seville orange, over which the skin was dark and hard; no enlarged glands in any other part of the body. Temperature ranged between 100° and 102°. He complained of chilliness, and suffered much from diarrhœa. There was no enlargement of the liver or spleen, but the blood was found to contain a large excess of white corpuscles, many of small size and granular. A few weeks later a gland below the left angle of the jaw became enlarged and tender. The pyrexia continued high, and death took place from exhaustion on August 25th. The post-mortem examination was made by Dr. Whipham. In the right axilla were two swellings about the size of Seville oranges, hard and unyielding externally, but softer in the centre. There was fibroid thickening of the right lung and pleura; no enlargement of bronchial glands; decolorised and recent coagula in heart. The spleen was small but natural to naked eye, and the intestines were also normal. The microscopical examination by Dr. Whipham, who furnished some excellent drawings of the appearances found, showed the swelling to be due to hyperplasia of the gland tissue, with groups of flat, irregularly shaped cells, especially near the capsules, probably proliferated endothelium. This was a case of "lymphatic leukæmia," and was remarkable in the glandular change being so limited. It seemed to show that the leukæmia was a primary condition, and not dependent on the lymphatic glandular affection.

Dr. COUPLAND showed the Intestines and Mesenteric Glands from a case of Lymphadenoma, and microscopical preparations of them, from a female patient twenty-five years of age, who was under the care of Dr. Thompson at the Middlesex Hospital from April 17th to June 3rd, 1877. Her chief symptoms were obstinate vomiting and diarrhœa, with great emaciation and weakness, the diarrhœa having been present more or less for eight months. There was a considerable febrile condition, with evening exacerbations of 2° and 3° towards death, which took place rather unexpectedly. Beyond slight but manifest enlargement of the cervical and inguinal glands, the chief changes were limited to the gastro-intestinal tract and mesenteric glands. The mucosa of the small intestines was greatly thickened by what proved to be a uniform and diffuse overgrowth of the lymphatic tissue in the membrane; at the lower part of the ileum this occurred in irregular patches, not limited to the solitary or agminate glands, which were, however, mostly swollen. Superficial ulcerations occurred in places, and there was follicular ulceration in the stomach and colon. The spleen and liver were natural, and no excess of white corpuscles was seen in the clots blocking the bloodvessels. A similar case is described and figured by Cruveilhier in his Atlas (liv. xxxiv., pl. 2 and 3), the chief difference being that, except in the stomach, the hyperplasia was in that case limited to the solitary glands throughout the whole bowel. One of Dr. Murchison's cases of lymphadenoma (Path. Trans., vol. xx.) showed the same change to an extreme degree in the duodenum. The interest of the present case lay chiefly in its almost complete limitation to the gastro-intestinal tract — an illustration of (to use Dr. Gowers' convenient term) primary "lymphadenosis" of this region.

Dr. WHIPHAM exhibited microscopical preparations and drawings from a case of Leukæmia associated with Cancer. The patient was a young man twenty-three years of age, who, in August, 1876, first noticed a swelling on the right side of the abdomen, and in the September following one on the left side. When admitted into St. George's Hospital on Feb. 21st, 1877, he was very anæmic, suffered from headache, giddiness, flushing of face, and profuse sweats, and had a cough and hurried respiration. A large mass could be seen and felt in the splenic region, reaching nearly as far as the nipple. The blood contained an excess of leucocytes; the urine was albuminous and loaded with urates. On the 25th of March he was seized with dyspnœa and died. The body was well nourished; skin mottled. The lungs were congested; the left adherent. The heart contained pale-red fluid blood, and a solid, almost white clot; and the bloodvessels were filled with white and yellowish-white coagula. The kidneys were enlarged. The spleen weighed seventy-eight ounces, and was tough and fleshy, the trabeculæ forming a coarse white network; it was the seat also of numerous infarctions of old clots. Beyond the filling of the bloodvessels with pale clots, the brain and cord were natural. There were no enlarged lymphatic glands. The thyroid was somewhat enlarged. The liver, which in the recent state appeared natural, after immersion in spirit presented numerous white, pea-sized, sharply defined nodules of new growth, which on microscopical examination were found to be composed of nucleated cells, columnar and subcolumnar in type, arranged in irregular alveoli resembling carcinoma. There was no intercellular substance, and there was a gradual transition in the shape of the cells to those of the liver-substance. The sections showed also bloodvessels filled with leucocytes, and in places the latter were collected also around the vessels. The induration of the spleen was found to be due to old extravasations of blood and a general formation of fibrous tissue. At one part a coarse fibrous reticulum abounded around the arteries of the spleen, radiating from them. A portion of what to the naked eye appeared to be pancreas was found to consist wholly of a tubular growth of pyriform, angular, and columnar cells, much as in the hepatic nodules, with great thickening of the walls of the bloodvessels, and abundant stromal tissue arranged as in an acinous gland, the included spaces being filled by a homogeneous material resembling colloid substance. A similar material filled many of the alveoli of the lung, the walls of the alveoli being thickened. The capillaries in the heart-wall were distended with leucocytes. The lymphatic glands, spinal cord, cervical ganglia, &c., were examined, but no changes found in them. The medullary spaces of the sternum were found filled with leucocytes, which also composed the white clot found in the heart. Many of these white blood-cells were of large size, and contained one, two, or three nuclei. Dr. Whipham asked if the case were not an instance of the connexion between leukæmia and carcinomatous growth. Recorded cases of leukæmia complicating cancer are rare, but Dr. Moxon has pointed out that in cancer the white blood-corpuscles are increased. In the present case the actual cancer-growth was limited and probably in an early stage of development, but the multiplication of leucocytes was well marked. The occurrence of polynucleated cells in the blood was also suggestive of cancer. However, in the present state of knowledge, the case must be regarded as one of the coexistence of these two conditions. Clinically it was an example of leukæmia, pathologically of leukæmia and cancer.

Dr. GOODHART exhibited specimens and microscopical preparations of cases of Lymphadenoma and Leukæmia, and commenced his remarks by giving brief outlines of a number of cases of lymphatic disease, which he premised might at first sight seem to have no relation one with another, but which he thought had considerable pathological affinities. 1. Large masses of caseous mediastinal glands, leading to infiltrating caseous growth in the lung and its vicinity from a child, who had suffered from whooping-cough, the determining cause, probably, of the glandular affection. 2. A child, three years of age, with a large local tumour on the left side of neck, with evidence of extension downwards into mediastinum. The case was only seen during life. 3. A boy, six years of age, under the care of Drs. Pavy and Pye-Smith, suffering from paraplegia. Previous to his admission he had been in good health. There was no superficial glandular enlargement. Death occurring from pneumonia; a considerable lymphomatous growth was found at the root of the neck, spreading into the pleura, which was studded with secondary growths. Just below the infiltrating growth was a large old caseous gland. This relic of a bygone inflammation had probably acted as a local centre, from which the lymphoma ultimately arose. 4. A case of old disease in the knee in a young man, with caseous inguinal glands, the change spreading so as to involve the lumbar, mediastinal, axillary, and cervical glands. There were also growths in the spleen. This case, which Dr. Goodhart had published elsewhere, was, he remarked, a good example of Hodgkin's disease, and somewhat allied to scrofulosis. 5. Specimen of lymphomatous tumour in the brain in a case of lymphadenoma, for which he was indebted to Mr. Hutchinson, who would give details of the case. A growth of this nature was very rare in the brain; but he had found a similar case in Guy's Hospital Reports. 6. A case of lymphadenoma recorded by Dr. Fred. Taylor in the Pathological Transactions. 7. A boy, twelve years of age, who rapidly developed enlargement of glands and spleen, with leukæmia. Here also the glandular affection was infiltrating. 8. A man, aged sixty-five, with enlarged glands in the axillæ, groins, and neck, and enlargement in the splenic region and leukæmia. Some infiltration of the rectum was also discovered, and a week after being first seen jaundice appeared. The patient then ceased to attend at the hospital, and had not since been heard of. These cases, Dr. Goodhart thought, might be classed under six types — viz.: (1) local chronic inflammation, (2) local tumour, and (3) local infiltrating or malignant tumour, and also (4) generalised chronic inflammation, (5) generalised simple tumour, and (6) generalised malignant tumour. These were distinct types of various diseases, but were so linked together that it was impossible to separate them pathologically. A similar gradational series might be found in other tissues—e. g., in skin we meet with local chronic inflammations, papilloma or simple growth, and epithelioma or malignant, and these, again, had their analogues in a generalised condition. So with connective tissue and bone, where the transitions from chronic inflammation to tumour growth were difficult to establish. Thus the generalised condition of bone-enlargement described by Sir James Paget as "osteitis deformans" was regarded by Dr. Goodhart as a generalised tumour growth merging into cancer. If such analogies held true of the lymphatic system, then leukæmia has nothing in it essential, but is something superadded; and although Dr. Wilks said that Hodgkin's disease was not associated with leukæmia, still the group of cases described as lymphatic leukæmia by Virchow must be recognised. Even in these cases there was some enlargement of the spleen associated with the general glandular enlargement, and possibly the reason why it so seldom appears may depend on the fact that in a great number of the cases of

lymphadenoma the glands are shut off from the circulation by their caseation or fibrous degeneration. If the physiological fact that lymphatic glands supply white corpuscles to the blood be true, there was no reason why they should not continue to do so in disease. These views were in harmony with facts of leukæmia occurring in association with other diseases—e.g., cancer, as related by Dr. Whipham; or as Dr. Wilks had mentioned, in cases of suppuration and acute abscess. Dr. Goodhart, in examining pyæmic blood, found a certain amount of leucocytosis in most (in one case as many as 50 or 60 in a field). He thought also that chronic enlargement of the spleen had very close relations to leukæmia. Last year a child ten months old was brought to the Evelina Hospital with enlarged spleen. It had marked pallor, but there was no excess of white corpuscles. Since then, however, the number of leucocytes had increased, and on one occasion, when it presented a purpuric rash on the skin, as many as 200 and 300 leucocytes were counted in the field of the microscope. That was a case of chronic enlargement of the spleen, lasting for some time, with a subsequent development of leukæmia. He thought, with Dr. Gowers, that there was a connexion between splenic leukæmia and malaria, although only 25 per cent. may have had ague. He had now eight children under his care with chronic enlarged spleen; in some as many as from 70 to 80, and in one 150 white corpuscles were found in the field. Such cases seemed to show that chronic splenic enlargement in the child might eventuate in the splenic leukæmia of the young adult. Yet the mere size of the spleen was not essential to leukæmia; he had met with a case of a spleen weighing 82 oz. without any increase of white corpuscles. As to medullary leukæmia, Dr. Goodhart had found in two cases of the splenic disease yellowish pus-like material in the bone-marrow; and he did not think much evidence had yet been adduced in favour of an independent affection of the bones, for in Mosler's cases the spleen was also enlargod. There may, however, be a generalised lymphomatous growth in bones.

The PRESIDENT said that concluded the exhibition of specimens relating especially to lymphadenoma and leukæmia, and he thought it had shown the utility of the practice of grouping specimens illustrative of similar diseases. It had brought forth important facts, and would, he hoped, elicit much discussion. It had certainly gone far to re-establish the distinction between splenic leukæmia and Hodgkin's disease. The absence of leukæmia in the latter, as pointed out by Dr. Wilks, had been fully confirmed by Dr. Greenfield's statement that out of thirteen cases of Hodgkin's disease, only one showed any excess in the number of white blood-corpuscles. He himself had not met with any increase in the white corpuscles out of seven or eight cases of lymphadenoma. There was also the important distinction of the invasion of adjacent tissues in lymphadenoma. The occurrence of ague in a large proportion of the splenic cases, as pointed out by Dr. Gowers, was another point of difference. Another question of importance was, what amount of increase in the white corpuscles constitutes leukæmia? In almost all febrile diseases there is some increase of white corpuscles, and on the other hand there was no doubt that actual leukæmia did occur with little or no disease of the spleen, as in suppuration and in erysipelas. There was one clinical symptom in connexion with lymphadenoma which had been pointed out by Dr. Greenfield. It was that of paroxysms of fever occurring in the course of the disease. In a case he published in the Transactions some years ago, of a patient who had been under the care of Dr. D. Powell, and subsequently of himself, there were not only febrile paroxysms lasting a few days, but after each paroxysm there was increase of the lymphatic growth. Similar paroxysms were said to occur in "idiopathic pernicious anæmia," where the glands were not involved. Such a case would be related by Dr. Dickinson.

Dr. DICKINSON then related particulars of a case of Idiopathic Pernicious Anæmia. The patient, a gentleman of high rank, was under the care of Sir W. Gull. He was born in 1804; married at the age of twenty-two; became a widower at fifty-six, with no children; married a second time at the age of fifty-eight, had five children, and enjoyed good health until the beginning of 1872, when he began to suffer from bloodlessness and extreme debility, and died in July of the same year at the age of sixty-eight. He had no cough or dyspnœa; the liver was not enlarged; intestinal evacuations were normal, but infrequent; the urine was normal; the temperature not increased. He seemed to suffer from progressive bloodlessness and loss of strength, which no treatment could improve, and he died from syncope. He was seen by many leading physicians, and many different opinions were expressed as to the nature of his case. Sir William Gull said that, in his view, the case was one of spontaneous bloodlessness, and he did not think any obvious organic change would be found after death, except, may be, in the suprarenal capsules. Dr. Dickinson was requested to make the post-mortem examination, and he found an extremely marked pallor of the surface, a trace of œdema about the ankles, but no emaciation; in fact, there was a large amount of fat in the abdominal parietes and omentum. The lungs were slightly emphysematous; the heart flabby and relaxed, with slight fatty degeneration of its muscular substance, and a little fibroid thickening of the valves. The liver was not enlarged nor obviously diseased; a small cyst, with clear aqueous contents, occurred in left lobe, and four gall-stones occupied the gall-bladder. The stomach and intestines were natural. The spleen weighed about ten ounces, and was extremely diffluent, the pulp containing a number of cellular forms, but few red corpuscles and crystals of hæmatin. The suprarenal capsules weighed three drachms and one drachm respectively, but were free from morbid changes. The absorbent glands were small; the kidneys slightly roughened on the surface. The blood examined after death showed a general deficiency in corpuscular elements; it was very pale in colour, and formed soft pale coagula.

It was proposed by Dr. Douglas Powell, and seconded by Mr. Wagstaffe, that the meeting should be prolonged for half an hour.

Sir W. GULL said he had nothing to add to what was already well known, but it was clear that we required more exact knowledge upon the three conditions of Hodgkin's disease, pernicious anæmia, and leucocythæmia. Leucocythæmia is most characteristic, sometimes showing an excess of white corpuscles over the red, although it must be borne in mind, in estimating the proportion, that the white corpuscles are of larger size and occupy a larger area. The investigation should not be limited to the microscope, but the chemical characters of these white corpuscles should, if possible, be arrived at; for he felt sure there were differences of quality between corpuscles, those in leucocythæmia being more allied to inflammatory corpuscles. In that disease there was nothing more remarkable than the pyrexia, the temperature ranging between 100° and 103° F., and that continuously. He quite agreed with Drs. Goodhart and Gowers that it had some relation with intermittent fever; and a case might have malarial origin without any definite attack of ague occurring. As regards anæmia, it was a purely negative condition. The gentleman whose case Dr. Dickinson had just related was a nobleman occupying a distinguished position. He became white and weak; was seen by several physicians; all said there must be something, one suggesting tubercle, another cancer of the liver, &c., so that when he died it was thought well to get an independent opinion upon the post-mortem appearances, and Dr. Dickinson had told the Society that the case was as negative in obvious conditions after death as it had been during life. Sir William believed these cases of anæmia in the adult to be the same as the anæmia in the girl. Iron, tonics of all sorts, food, &c., may be given, but still the case goes on to death. He did not think Hodgkin's disease so common as members seemed to think. It was a remarkable malady, the glands gradually becoming large and soft, and sometimes disappearing in twenty-four hours, as in a case he had seen, where one day a patient had large masses in the axillæ, and on his next visit Sir William found that these had disappeared, and before the patient died not a trace of the enlargement remained. He had followed Dr. Goodhart's exposition step by step, but he thought he had gone on the wrong line, for it was the aim of pathology to individualise and differentiate, rather than to generalise: to show why a growth is local in one case, infiltrating in another, and so on.—Dr. WILKS pointed out that the question of pernicious anæmia did not rest quite where it was six years ago, for it had been shown that in these cases there is actual death, or necrosis, of the red corpuscles.—The PRESIDENT said that the first case of leucocythæmia by Dr. Hughes Bennett was described by him as "suppuration of the blood," and he showed there was no distinction between the pus and white blood-corpuscles.

Mr. HUTCHINSON gave some particulars of the case of Lymphoma of the Brain referred to by Dr. Goodhart. The patient, a single lady, forty-four years of age, suffered from

pain at the back of the head, and other symptoms, supposed to be hysterical, and she consulted Mr. Hutchinson for imperfect vision. He found occasional squint, and evidence of optic neuritis, but he also noticed large masses of glands in the neck and axillæ. These had been enlarged for six or eight years. She subsequently lost smell, used to mistake her identity, and died comatose. Dr. King, of Bath, sent the brain to him, and it had been examined by Dr. Goodhart. Mr. Hutchinson related the facts of another case. A year ago a man came to him with double ophthalmitis; the aqueous was greenish and cornea steamy. He died in two months, the eyes rapidly softening. Mr. Nettleship made a careful examination of the eyes, and found nothing allied to lymphadenomatous growth in them, only exuded white corpuscles in places. Dr. Sutton, who made the post-mortem examination, found lymphadenomatous growths extensively diffused in the viscera, and enlargement of lymphatic glands. The condition of the eyes was similar to that met with in "sympathetic inflammation" of a sound eye after injury to its fellow; but here both eyes were attacked together by this destructive inflammation.—Dr. TURNER exhibited microscopical preparations of the spleen and glands from this case.

MEDICAL SOCIETY OF LONDON.

Cases of Skin Disease.—Selection of Operation for Stone in the Bladder.

AT the meeting on April 1st, Mr. Erasmus Wilson, President, in the chair, five cases of Skin Disease were exhibited by Mr. B. SQUIRE. 1. A man aged seventy-eight, with rodent ulcer on right cheek for four months. Treated by erasion of margin and base of ulcer under chloroform. Three weeks after ulcers granulating healthily and contracting. 2. Boy aged ten, with lupus vulgaris on right cheek for seven years. Similar treatment to No. 1. Five weeks after sore nearly healed. 3. Case of general eczema-impetigo in man aged twenty-eight. Treated for ten weeks with free phosphorus internally, in average dose of half a grain per diem, with considerable benefit. 4. Severe impetigo of scalp in girl aged nine. Treated during two months with phosphorus with much improvement. She had taken in all fifteen grains of the drug. 5. Case of circumscribed chronic lichen in girl aged fifteen. The eruption covered both sides of the face, and had lasted for two years. Phosphorus administered as in the other cases for seven weeks. The itching had almost gone, and a faint stain alone remained in some parts where the eruption had been.—The PRESIDENT said the cases showed how far phosphorus was useful; by improving the general health it acts beneficially on those skin affections which are constitutional. The case described as rodent ulcer was, he thought, one of epithelioma, and he did not think the disease was eradicated. He preferred the use of potassa fusa to the scoop, applied in the proportions of one part of water to two of potassa fusa.—Dr. TILBURY FOX thought the conclusion to be drawn from the eczema cases was not to give phosphorus. Referring to Mr. Wilson's remarks, he said that in obstinate cases of lupus he followed up the caustic potash with the application of acid nitrate of mercury. In hyperæmic cases the application of caustic potash is apt to be followed by the extension of the disease. In rodent ulcer the objection to Mr. Squire's plan was that, being "merciful," it was not sufficiently thorough. Excision and treating the wound with chloride of zinc would more thoroughly eradicate the disease.—Mr. BRYANT quite agreed with Dr. T. Fox that simple surface treatment of rodent ulcer was useless. After excision he would use the galvanic cautery. There were many cases of lupus in which free destruction of the tissues by the cautery was absolutely necessary.—The PRESIDENT said that both rodent ulcer and lupus were diseases which must be stamped out.

Mr. TEEVAN then read a paper "On the Selection of an Operation for Stone in the Bladder." The following conditions presented themselves for consideration in determining whether a stone ought to be crushed or cut out:—1. Sex. Neither operation was barred by sex. Lithotrity was specially indicated in females, for in them the urethra was short, straight, and capacious. 2. Up to puberty crushing was not eligible excepting for the disposal of a little stone which could be got rid of at one sitting. 3. Size of stone. It was quite impossible to say with mathematical accuracy what was the size of the largest stone which could be crushed with safety. Broadly speaking, all stones under one inch and a quarter could be safely got rid of by lithotrity. 4. Multiple calculi might be regarded, if small, as fragments of a crushed stone. 5. The local and constitutional conditions associated with an oxalate of lime calculus were more favourable for the successful performance of crushing than were those occurring with phosphatic stones. 6. The patient's general health. So long as there was a fair chance of recovery, or even of giving patients a few months of comfort, it would be cruel to refuse to operate. 7. Renal disease was no bar to crushing, for no one had as yet been able to show what was the maximum amount of disease compatible with recovery after operation. 9. The sacculated or contracted bladder precluded crushing. In atony of the bladder crushing could be performed, as the fragments could be got rid of by washing out the organ. 10. An enlarged prostate did not exclude crushing, provided it did not interfere with the explorations of the lithotrite. 11. Stricture of the urethra was remediable, and did not bar the crushing operation. 12. Idiosyncrasy. A very few patients suffered from rigors and urethral fever every time an instrument was passed. They ought to be cut, unless the stone were so small that it could be removed in a couple of sittings by lithotrity. A patient having a stone within the range of lithotrity, and being the subject of stricture and atony of the bladder, ought to be subjected to lithotrity at one sitting, and have the fragments immediately removed through the incision of external urethrotomy. The same might be said of a patient suffering from an enlarged prostate and stricture or atony. If a cutting operation were required, which kind of lithotomy was most eligible? In boys lateral lithotomy was specially indicated. In them median lithotomy is not justifiable, because in that operation the prostatic urethra is torn in its floor, and the lad rendered sterile when he grew up. In adult males a cutting operation was required for the removal of large stones. Lateral lithotomy did not afford sufficient room for the removal of such calculi, the rectum was cut through or torn, and there was always the risk of dangerous hæmorrhage from the arteries, which were cut in their trunks rather than their terminal branches. Lateral lithotomy sufficed for the removal of calculi up to one inch in diameter, but for larger ones the pre-rectal operation was the best, as it was equal in the space it afforded to two lateral lithotomies put together. It combined the maximum advantage with the minimum disadvantage. For the very old or debilitated, recto-vesical lithotomy was indicated, as in that operation the stone could be removed with the minimum amount of cutting. Median lithotomy was only eligible for those cases of crushing in which a cutting operation was required for the immediate removal of the fragments.—Mr. NAPIER said that in his opinion there were other considerations besides the stone to be taken into account in selecting the operation to be performed. Of these the most important was the condition of the bladder.—Mr. BRYANT agreed in the main with the author. In operating on persons who have extensive disease of the kidneys, the chances are largely in favour of death occurring. In such cases, if the patient is suffering agonies from the presence of the stone, it is our duty to operate simply with the view of giving relief to the sufferer for the last few weeks or months of his life. Then a cutting operation is the only one justifiable. He mentioned the following cases as illustrative of the difficulties of comparing statistics. A child, in whom he had detected stone, was brought into the theatre to be operated upon; but failing at the time of the operation to find the stone, he acted on the well-known rule of doing no more, and the child was sent back to the ward. A few hours afterwards he died comatose, and post-mortem examination showed grave disorder of the kidney. A boy was sounded for stone, and died five days later. At the autopsy both kidneys were found to be reduced to the condition of mere suppurating sacs. Had these two cases been operated on, the statistics would have shown two fatal cases that in reality were due to causes entirely apart from operation. Therefore, statistics in which such cases are mixed up are not worth anything.

PROVINCIAL MEDICAL SOCIETIES.

NORFOLK AND NORWICH MEDICO-CHIRURGICAL SOCIETY.—At the meeting held on February 5th, 1878 (Joseph Allen, Esq., President), the following gentlemen were elected members:—Dr. Probyn (Bury), Dr. Field (Walton), Mr. J. S. Clowes (Slatham), Dr. Harris (Norwich).—Dr. EADE read notes of a case of Hydatid of the Liver, which occurred in a man under his care in the Norwich Hospital. The patient, forty-seven years of age, had sustained an injury of the abdomen about thirteen months previously, soon after which symptoms of his disease manifested themselves. On admission there was a great fistulous orifice in the wall of the abdomen just above the umbilicus, discharging serous fluid. A solution of carbolic acid was injected into the fistulous track. A rigor and sharp fever followed, which lasted several days, after which hydatid cysts began to escape, and continued to do so for the next fifteen days. The number amounted to nearly 600. The man now began to improve in health, and gradually got well.—Mr. HUGHES, of Wymondham, exhibited two specimens of Spurious Hydatids of the Uterus, which had come under his notice dnring the last fourteen months. They presented the usual appearances of degeneration of the chorion.—Mr. CHARLES FIRTH presented a specimen of Diverticulum of Human Small Intestine, removed from an old man who had died a few days previously, after the performance of lithotomy.

MIDLAND MEDICAL SOCIETY.—At the ordinary meeting, Feb. 20th, pathological specimens were exhibited by Dr. Savage, Mr. Oakes, and Dr. Bassett. Mr. Mann gave the history and symptoms of a case of poisoning by bichromate of potash, which had come under his care; the case was successfully treated by the administration of chalk.—The PRESIDENT (Dr. Sawyer) read a paper "On the Causes and Cure of Insomnia." Insomnia was a frequent complication in many diseases, and should then be treated by appropriate remedies. The kind of sleeplessness he wished to notice in his paper constituted insomnia *per se*. He arranged cases of this kind into psychic, toxic, and senile; in all of which relative cerebral hyperæmia was the principal cause. Temperament has much influence in psychic cases. He gave a vivid description of an individual of the nervous temperament, and enumerated many causes which produced sleeplessness in such. The toxic cases are usually produced by agents which act primarily on the vessels of the brain, as tea, coffee, tobacco, and alcohol. The senile cases depend upon structural changes of the vessels, rendering them less capable of regulating the circulation. In the treatment of all it was important to remove sources of mental or bodily irritation, but many cases, especially psychic, could only be cured by drugs. Of these he looked upon chloral, with or without bromide of potassium, as most valuable, and had not met with any of the ill effects from its use described by some authors. Sometimes the preparations of digitalis and ergot were useful.—An animated discussion followed, in which Dr. G. F. Bodington, Mr. Oakes, Dr. Robinson, Mr. Yates, Mr. Priestley Smith, and Mr. Mann joined, and Dr. Sawyer replied.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—The eighth meeting of the session was held on March 1st; Dr. Eben. Watson, President, in the chair. The entire evening was occupied with obstetrical subjects—chiefly the exhibition, with explanations, of new forms of forceps.—Dr. JAMES F. WHITTAKER exhibited a Revolving Forceps, of which one-half was contained within the other half. The lock was a ball-and-socket joint, the ball being on the shank of one blade, the socket an expansion of the other shank. When introduced, the handles were opened out at right angles to the instrument, and while one blade was held in position, the other was revolved round to a point opposite. The chief advantages claimed for it were—(1) one introduction, instead of two; (2) introduction in any position of the patient; (3) if necessary, it could be applied with the os only partially dilated; (4) facility in locking; (5) it could be used without the patient's knowledge. The use of the instrument was demonstrated on a model. Dr. Whittaker also exhibited a Stylet for rupturing the membranes, fitting on to the fore-finger with a ring.—Dr. W. L. REID made some remarks on the Long Forceps, and exhibited a new form. After enumerating the defects of the existing forms, he pointed out the means by which he proposed to remedy these. These means were—(1) by a perineal curve in the forceps, to admit of traction *exactly* in the axis of the pelvic inlet; (2) by a swivel joint at the handle, to permit of the head accommodating itself to any slight abnormality in the cavity; (3) by antero-posterior blades, applied obliquely, to have the handle an exact index to the position of the blades, and in the same axis; and (4) by a pelvic curve in the shanks, instead of the blades, to admit of the instrument being used to rotate the head from the occipito-posterior to the occipito-anterior positions.—Mr. DAVID CHRISTIE, Corrigart, Donegal, exhibited another form of the long forceps, constructed to permit of traction in the axis of the inlet without undue pressure on the perineum. This was provided for by the handles being curved as much backwards as the blades were curved forwards. The lock was a compound French and Naegelé, working with a pinching screw. Mr. Christie also exhibited an apparatus for controlling post-partum hæmorrhage. It consisted of an india-rubber bag, which was introduced into the uterus, and distended with water by means of a tube, the pressure being regulated by placing the nozzle of the tube in a vessel of water at an elevation of two feet. The tube acted as a syphon in case of the uterus again relaxing. The various instruments and apparatus were criticised by Drs. J. W. Anderson, Hugh Miller, M. Cameron, Stirton, Thomson, and others. Mr. Christie's apparatus for arresting hæmorrhage was expressly commended for its simplicity of construction.

Reviews and Notices of Books.

Diseases of the Hip-joint. By JAMES G. BEANEY, F.R.C.S., Senior Surgeon to the Melbourne Hospital.—This is a clinical lecture, and necessarily deals with the subject somewhat cursorily. The cases are classified into those originating in the synovial membrane, and those originating in ostitis—usually of the femur; and the differential diagnosis is given. The author differs from Sayre as to all cases being caused by injury; and divides them into traumatic, strumous, and syphilitic. Nothing at all novel is suggested in the plan of treatment: the long splint is recommended in the acute stage, and then Sayre's splint, which is highly spoken of. Notwithstanding Hilton's cases of absorption of abscesses in cases of joint disease, we are told that those who would practise "sound surgery" should evacuate abscesses as soon as detected. Excision is recommended in cases where the patients are "evidently sinking fast from hectic fever and exhaustion," and "should not be deferred until it is too late." We look in vain for any more definite indications as to when this operation should be undertaken.

Guide to European Universities. By HERBERT JUNIUS HARDWICKE, M.D. Univ. Giessen.—This book consists of two parts. In the first the author gives lists of the British medical practitioners at home and abroad who possess a foreign or colonial degree or diploma. In the second part he gives the regulations for obtaining the degree of M.D. at most of the European Continental universities, together with the cost of the examinations, and some few of the more interesting facts in connexion with the universities. For those who contemplate studying abroad and taking a degree this "guide" will prove of great use. In looking over the regulations we are struck by noticing that at Würzburg two rejections, either in the thesis or at the *viva voce* examinations, are fatal to a candidate's hopes, and that in all the Austrian universities failure three times at any "rigorosum" disqualifies the candidate for ever presenting himself for examination again. At Basle the Faculty can determine how soon a candidate may present himself again. Would it not be a good thing if some such regulation could be introduced at the College of Surgeons? It would lead to more careful and thorough preparation for the examinations, and examiners would not have to complain, as they do now, of men coming to them quite unprepared; while it would prove a great saving of time to those who by nature and habit are quite unfitted for the

profession. We see that at Geneva every candidate is required to conduct an autopsy, a capital test of a man's practical acquaintance with morbid anatomy. One part of all the examinations is the writing of a thesis, and at all the universities, except Heidelberg, this has to be printed at the writer's expense; but here they *permit* only those who obtain the first honours to print the essay. Surely this is an example well worthy of imitation by the other Faculties.

On Numerical Anomalies of the Breasts; with Remarks on the Causes of Deformities. By WILLIAM SNEDDON, M.D., Beith.—This is a paper which was lately read at the Glasgow Medico-Chirurgical Society, when Dr. Sneddon showed a little girl who had two mammæ on the left side, together with a misplaced scapula, and deformity about the ribs. The author refers with more or less detail to all of the cases of polymastia and amastia that have been published. Polymastia is more common in females than males, though this may be more apparent than real, owing to the supernumerary mammæ not attracting attention unless functionally active. No case of amastia has yet been recorded in the male (and in females it is much rarer than polymastia). The anomalous breasts are most often met with in the axillæ or below the normal mammæ, but they have been seen also in the groin, on the thighs, or even on the back; they are rare in the middle line, and when there do not secrete milk during lactation, while those in other situations have been used for nursing. Four is the abnormal number of breasts most commonly met with; five have been seen in one case. In amastia there is often some other developmental deficiency on the same side, and it is supposed by the author that this may account for the absence of the breast, which is developed comparatively late. The author rejects the theory of the influence of maternal impressions upon deformities as lacking evidence. Viewed in the light of comparative anatomy, polymastia is interesting, as showing a tendency to re-establish the series of mammæ seen in other mammalia; but Darwin has lately repudiated atavism as a cause of this malformation, on account of the supernumerary breasts being sometimes met with on the back. Dr. Sneddon has stated his facts clearly and very concisely, and those interested in the subject will find the paper very useful, as it contains full references to the literature of the subject.

Fat and Blood; and how to make them. By S. WEIR MITCHELL, M.D. First English from the Second American Edition. London: J. B. Lippincott and Co.—In this small work we have described a plan of treatment which Dr. Mitchell has found useful in cases of severe and intractable hysteria—cases where there is anæmia, often wasting, constant complaints of aches and pains, weariness and fatigue with the least exertion. The patients are put under the care of a trained nurse, away from the sympathy of well-meaning but injudicious friends. They are confined to bed from four to eight weeks, and kept perfectly at rest for the greater part of the time. The harmful effects of this rest are combated by the daily use of the faradaic current and "massage," which exercise the muscles, aid the circulation, and assist the general nutrition. The other part of the treatment consists in giving large quantities of food. At first nothing but skimmed milk is given, until the dyspepsia which often exists in these cases is overcome, and then ordinary food is added. By these means we are assured that flesh and strength are gained, the anæmia is cured, and general health in a large proportion of cases re-established. In certain cases of anæmia with flabby fatness, without organic disease, Dr. Mitchell has found rest in bed, with a skimmed milk diet, so reduced as to cause a loss of weight of half a pound a week, followed afterwards by a good diet, are productive of good results. The introductory chapter on Fat in its Clinical Relations contains some statements of interest. The effects of electricity and massage, in causing a general rise of temperature, are shown by tables of the temperature of several cases.

Analytical Records.

APERIENT FRUIT LOZENGES.
(H. C. BAILDON AND SON, 73, PRINCES-STREET, EDINBURGH.)

These lozenges are prepared from the bark of the *Rhamnus frangula*, or black alder. The bark was, we believe, first introduced into England by Mr. Baildon in 1871. It is said to be largely used in Holland and Germany. Lozenges containing a few grains of the extract are now offered, and, from the few trials we have witnessed, we are inclined to think well of them. They seem to be mild and uniform in their operation. One great advantage claimed for them is that no increase of the dose is said to be necessary; if so, this will render the remedy a most useful one.

PHOSPHORUS CAPSULES.
(YOUNG AND POSTANS, 35, BAKER-STREET, W.)

The phosphorus is dissolved in cod-liver oil, and each capsule contains the thirty-second of a grain of phosphorus. The capsules are as well made as possible, and will be found very convenient, the phosphorus being well protected from the oxygen of the air.

GRANULAR EFFERVESCING ARSENIC.
(YOUNG AND POSTANS.)

Each teaspoonful is equal to three minims of Fowler's solution. The use of arsenic appears to be on the increase, and it would be difficult to find a better mode of administering it than this preparation affords.

BRAGG'S MALT BISCUITS AND MEAT BISCUITS.
(T. J. BRAGG, 14, WIGMORE STREET, W.)

Both of these preparations may fairly be described as excellent of their kind. They are crisp and light, and although the characteristic flavour is quite distinct in each, they are very good eating. The number of new malt preparations which reach us from time to time would alone show the estimation in which the article is now held. Of course the idea is to use the diastase as an aid to the saliva in the conversion of starch. But we confess it appears to us somewhat doubtful whether the diastase would survive the heat of a baker's oven.

THE GOVERNMENT MEDICAL BILL.

To the Editor of THE LANCET.

SIR,—I understand that a meeting of the Council of the Royal College of Surgeons of England was held on Monday last for the purpose of taking into consideration the Government Bill for the amendment of the Medical Acts, and we shall doubtless soon be made acquainted with the result. Considering, however, that only lately that judicial body gave full support to the now notorious Dental Practitioners Bill, which contained clauses so offensive to the members of the medical profession generally, that upon its publication petitions praying for their erasure poured into the House of Commons from all parts of the United Kingdom, till the promoters of the Bill were shamed into erasing them, I would suggest the propriety of hesitating before accepting as influential any judgment that may emanate from them; and, further, that an opportunity should be afforded to the representatives of the various branches of the profession, of expressing their views at a public meeting, where resolutions might be formed and passed important to the whole body, and calculated to carry weight with the Government, which, I hear (on good authority), is anxious not only to ascertain the real wishes of the profession, but to introduce whatever amendments may, by them, be deemed desirable.

I am, Sir, faithfully yours,

W. DONALD NAPIER.

George-street, Hanover-square, April 4th, 1878.

THE LANCET.

LONDON: SATURDAY, APRIL 6, 1878.

THE Medical Council is to meet on Wednesday next. It is uncertain whether the Council will take thought at its meeting for those subjects which annually require its attention. Probably not. The Council has ample work in undertaking a discussion of the Medical Bill now before Parliament, and we may be sure that this will be the principal, if not the only, subject before it. It will be very curious to see the effect produced upon the Council by a measure studiously framed for pleasing the nineteen bodies which it principally represents. We only hope that the Duke of RICHMOND and GORDON will take the opportunity which the discussion will afford of studying the working of a body constituted as the General Medical Council is. The Council is, at one point, very complimentarily dealt with by the Duke of RICHMOND'S Bill. The Bill proposes to give it increased powers. Clause 14 says it is desirable to give the Council "further powers" for the performance of the duty of superintending the examinations, especially with a view to the double qualification being granted "on the like" terms in all cases. The subclauses define these further powers, which consist essentially in having, as a duty, to frame rules for regulating the examination of persons desiring to obtain a double qualification. When the Bill is considered as a whole, and Clause 14 is more minutely examined, it appears that the compliment to the Council is sharply limited. The Council will only have power to make examination rules for regulating the examination of persons desirous of a double qualification "within the meaning of the Act." Now, there should be no limit to the number of such persons, for, practically, all persons in future wishing for diplomas would wish to take the double qualification, for the double reason that it is the right thing to do, and that henceforth no persons will be registrable who do not possess a qualification in medicine and surgery. But here come the limitations. The Bill seems to give the Council no increased power over the examinations of the individual corporations and universities; it leaves these unmolested. It does not compel conjunction of the different bodies in each division of the kingdom, and there are ample indications that this conjunction will never be undertaken spontaneously. In this almost certain case the "further powers of the Council," which constitute a considerable feature of the Bill, will never be realised, and, in this respect, as in so many others, the Bill will be illusory. Even if Boards were constituted under Clause 15 of the Bill, they would require the sanction, not of the Medical Council alone, as at present, but that of the Privy Council also. Further, the examination rules which the Council is empowered to make in the unlikely event of schemes for the formation of the Conjoint Board being realised, are also subject to approval, or modification, or rejection of the Medical Council. All things considered, the Council cannot be much flattered by the "further powers" granted under Clause 14. Moreover, we venture to believe that, as a whole, the Council will feel and express profound disappointment that a Government should have ventured on medical legislation without securing, above and before all things, the consolidation of the licensing authorities in each division of the kingdom. Mr. SIMON especially, who once addressed the Council in the name of the then Lord President in favour of legislation in the direction of substituting "a more or less consolidated examining authority for the many separate Examining Boards" which now act under the General Council, may be expected to say whether this apology for legislation is worthy of the approval of that body.

We have by no means exhausted the proposals of the Bill affecting the General Medical Council. One of these, contained in Clause 13, will require the Council to delegate its judicial functions to a Committee of five of its own body. This seems to us a proposal of very doubtful propriety. When the Council at present exercises its judicial functions—which, by the way, it does too much with closed doors—the persons judged have the satisfaction of knowing that they have been judged by a large jury of their peers. Henceforth this judicial function is to be lodged with five persons, who may have limitations either of feeling or faculty unfitting them for a broad and just view of particular conduct. Even if they were well qualified for such duties, their duty will not be an enviable one, and, their numbers being small, a certain amount of dissatisfaction with them personally will be apt to be felt by persons who think themselves wrongfully judged.

But, perhaps, the most serious question for the Council to consider is whether it should undertake the new duties of supervising the examination and registration of dentists and midwives. Either of these duties will add seriously to the Council's work, and neither of them will add anything to the dignity of the work. It may be necessary to create a class of dentists, distinct from that of regularly educated doctors, but it seems to us hard to ask a Council of medical education to undertake to regulate their creation and registration. It certainly is necessary for the State to attempt to raise the character of midwives; but it does not need a Council of Medical Education to do this, and, considering how much the Council has to do already, and how much it leaves undone, we think it would best consult its own dignity and reputation by respectfully declining the new duties to which it is invited by the Lord President.

THE Royal College of Physicians and the Royal College of Surgeons have both held meetings during the week to take into consideration the Medical Bill of the Lord President. At the College of Physicians a deputation, consisting of the President and several Fellows to be nominated by him, were authorised to wait on the Lord President of the Council to point out to him the objectionable features of the Bill, to seek modification of these, and to report to the College. A similar course was taken by the Council of the College of Surgeons, who seem to be of opinion that the Bill requires considerable modification, especially as to those clauses relating to a Conjoint Examination Scheme, and to the conferring of increased powers upon the General Medical Council at the expense of the Medical Boards. It may

easily be understood that the objections of the Corporations cannot be much more particularly divulged until they have been communicated to the Lord President. The Conjoint Scheme clauses will not be satisfactory to the English bodies unless conjunction is made compulsory all round. The Corporations may be excused for feeling a little jealous of the increased powers to be given to the Council. But in the present form of the Bill, they have not much to fear on this point, as we have shown elsewhere. As to the admission of medical women, the Corporations may be expected to demand that if women are to be admitted to the profession, it must be through examinations, if different, yet of equal severity with those for men. There is good reason to believe that the Government are prepared to listen to the views of the Corporations. In fact, the only serious view of the Bill is that which regards it as a piece of clay in the hands of the potter. If the Bill ever becomes an Act, its character will depend on the comparative strength of the hands of the different potters who are invited to mould it. Probably our Scotch friends will prefer to keep it very much in its present form; they may even show an almost paternal admiration for it, as one interfering least with their prejudices, and not compelling them to do anything they are not disposed to do. Irish opinion will be divided, but we shall venture to hope that the Irish party, as a whole, in the Council will insist on the bodies being compelled to conjoin. If this much is not asked for by the Corporations and the Medical Council, and conceded by the Government, it would be far better to let things remain as they are, in the hope of legislation by more earnest statesmen.

WE have so strenuously insisted on the importance of making the medical authority supreme in asylum management, that no one will be surprised to find us clinging to the hope held out by the County Government Bill of a substantial improvement in this direction. That there are model committees connected with a few of the county institutions for the insane scattered throughout the country is well known to all who have any practical acquaintance with the subject, and it is only natural that medical superintendents and officers who are, or have been, so fortunate as to occupy positions of responsibility under these lay authorities should entertain the highest respect for, and a large measure of confidence in, a system of control under which they have enjoyed every facility for the treatment of their patients, have been relieved from many needless burdens of business or anxiety, and generally experienced warm support and sympathy in their work. It is, however, notorious that widely different results are generally attributed to the system of administration by visiting justices, regarded as a whole. The number of committee-ridden asylums is considerable, and not a few of those which suffer most severely under this affliction are nominally controlled by medical superintendents who either lack the courage, or are too inert, to claim the independence which is, in point of fact, essential to the prompt and satisfactory discharge of their medical duties. We make no secret of the hope that under the provisions of the County Government Bill committees of visitors will be less coherent and exclusive, and more will be left to the personal management of the medical officer.

It is solely because we cherish this anticipation, we have not opposed the measure on its merits. To introduce the "guardian" element into asylum committees, as at present constituted, and if they are to exercise the functions hitherto performed by them, would be a calamity. We assume that the primary purpose of the County Boards will be the custody of district funds, and that the method of administration adopted by the new local authority in respect to asylums will be pretty much that pursued with regard to other branches of expenditure; that is to say, a fixed sum per annum will be allotted for the maintenance of the institution, and it will be the chief care of the visiting committee to see that the money is not unwisely or improperly spent. It is scarcely conceivable that a small body constituted of elements so heterogeneous as those which are to compose the County Boards, and of course their committees, would pretend to exercise direct authority. If practical business of this class were attempted, we venture to think the compound of incompatible elements would not hold together a month. What *will* happen is probably this: the guardians who may be appointed on a visiting committee will, after a brief show of energy, find it inconvenient to attend; or, if they should do so, the justices will find their time and thoughts required in some other quarter; so that practically the duty of visiting will come to be discharged by some two or three conscientious, or "fussy," members, who, being only a fragment of the body of supervision, and practically unable to count on the support of the majority, will hardly presume to claim personal control. The view we have taken may not be very exalted, but it is sound and permissible, because the single object in which we are interested is to secure for the medical officers of asylums the opportunity for control, in its professional sense, which does not exist in the majority of institutions under the existing *régime*. We think the purely managerial functions required for the daily conduct of an asylum may be best performed by a steward acting under the medical superintendent, and that the authority of a committee of visitors ought to be limited to the supervision of expenditure and the administration of finance; leaving the physician free to employ whatever measures he may deem expedient for the care and treatment of his cases, and placing in his hands the entire control, selection, employment, and dismissal of all servants who are in any way brought into relation with his patients, and whose service may form an element in the process of custody or cure. It is solely on the ground that this result seems likely to be gained—indirectly, it may be—by the Bill, we do not oppose it.

Other benefits may be expected to accrue from the measure now before Parliament. Not the least important is the creation of a new point of departure in reference to the policy of payment. It *may* be possible to convince a financial board, numbering among its members men still engaged in commerce, that it is shortsighted economy to give public servants insufficient remuneration, and leave them without any certain prospect of a superannuation allowance. These are matters which must not be allowed to escape notice, and this is the precise moment when they should be pressed on the consideration of members of the House of Commons. If no prominent care is bestowed on the subject of salaries and pensions while the Bill is under discussion, it will be vain to hope for advantages hereafter. The scale of payment adopted in asylums generally is meagre to a degree which has

scarcely a parallel; the junior medical officers are scarcely in receipt of sums sufficient to cover their personal expenses, and, as a consequence, the choice for these appointments is limited to men who have little hope of success in other branches of practice, or who are intent on making a specialty of lunacy practice. It would be well if these subordinate posts, being fairly remunerative, could be made to attract young men who would take them as qualifying positions for good general practice, so that a much-needed acquaintance with mental diseases might be widely disseminated. The provision of definite rules with regard to pensions is, as we have said, not less important. To induce capable men to regard asylum practice as a permanent occupation, there must needs be a future in the career, and a term of service after which the medical superintendent will be able to retire. He ought not to be left with no better or more encouraging prospect than the privilege of appealing to the generosity of a board at the age when men in other departments of public work can count on rest and reasonable competence. The claim of asylum officers in both these respects is so clearly made out that no new argument can be needed to enforce it. Meanwhile, unless the matter is brought forcibly before the Legislature while this reconstituting measure is under discussion, a great opportunity will be lost, and so far from the County Government Bill being a gain to our professional brethren, it will involve them in new troubles, while it deprives them of old friends, who have, in some instances at least, dealt kindly with the medical officers of asylums while "meddling and muddling" in their work.

THE presence of albumen in the urine, even in very minute quantities, is usually taken as conclusive evidence of such a condition of systemic derangement as deserves to be regarded as disease. Professor LEUBE, of Erlangen, considering the fact that a trace of albumen is occasionally present in the urine of patients who present no other evidence of renal disease, examined the urine of a large number of men presumably in good health, soldiers on regular duty, in order to ascertain whether albumen could ever be detected in the urine of those who presented no other morbid symptoms. He examined the morning urine of 119 soldiers, and found a trace of albumen in that of five, in one a distinct quantity, in the others merely a faint, just recognisable, trace. In each case the mid-day urine also contained albumen, and in three the amount was larger than in the morning urine. So far the results are not surprising, since they would seem explicable on the theory that these soldiers were suffering from incipient renal disease, which, as is well known, may be unattended by any indication of deranged health. But it was found that albumen was present in 14 soldiers out of 119, whose morning urine had been free from albumen. In all these instances the soldiers had undertaken arduous duty, marches or battalion drill, during the forenoon, but no food or drink had been taken during the exercise. No casts or blood were found in the deposit from the urine. The albumen soon disappeared with rest. This fact seems to show that in apparently healthy men exertion may induce slight albuminuria. This opinion was supported by an instance in which the urine of a soldier was for two days free from even a trace of albumen, but on the third, after a long battalion exercise, it contained a distinct trace, which had disappeared in two or three hours, and was also absent the next morning. In every case in which albumen was present any indication of disease, local or general, was carefully searched for, but none could be found. The conclusion LEUBE draws from his observations is that "in the vast majority of cases the urine of healthy persons is quite free from albumen; in rare cases a slight, but distinct, albuminuria coexists in a completely normal state of system, and is comparatively frequent if bodily exertion precedes the secretion of the urine."

What is the origin of this temporary albuminuria? Our knowledge of the condition of urinary secretion is still too indefinite to permit a satisfactory answer to be given to this question; but it may be explained on either of the current theories of urinary secretion—that of simple filtration of all the urinary constituents through the Malpighian capsules, and that of the specific secretion of the urine by the cells of the tubules. On the filtration theory, the absence of albumen from normal urine is accounted for by supposing that either the walls of the bloodvessels permit the passage of water through them, but retain the colloidal substances, as albumen; or else that albumen passes through the membranes of the Malpighian capsules, and is removed again by the epithelium of the tubules. On the theory that the transpirability of membranes depends on the size of their "pores," LEUBE fancies that in some individuals these pores may be of such a size as to permit the passage of some colloidal albumen as well as of water: either constantly, under normal pressure; or occasionally, when the abnormal pressure is increased by exertion. On the theory that albumen is pressed out of the blood in the Malpighian capsules, and is removed subsequently by the action of the epithelium of the tubules, the exhaustion of this function of the epithelium, or its inadequacy, affords an equally facile explanation of the observations in question.

Annotations.

"Ne quid nimis."

REPORT OF THE COMMITTEE ON LUNACY LAW.

AT length the Select Committee, first appointed early last year "to inquire into the operation of the Lunacy Law, so far as regards the security afforded by it against violations of personal liberty," have reported. It is difficult, looking to the nature of the judgment pronounced, to discover the reason of the long delay. Having taken a considerable quantity of evidence, ranging over a field of vast extent scarcely bounded by the limits of the Reference, the conclusion reached is, that "although the present system was not free from risks which might be lessened, though not wholly removed, by amendments in the existing law and practice, yet, assuming that the strongest cases against the present system were brought before them, allegations of *mala fides* or of serious abuses were not substantiated." "Much of the evidence, which extended to a great length, amounted," the Committee say, "to little more than differences of opinion among medical men, questions of liberality or parsimony in the arrangements of asylums, suggestions with reference to the letters of patients and visits of friends, or complaints of hesitation among superintendents and relatives to believe in the perfect recovery of patients."

It is not easy to say precisely what the Select Committee "recommend" in the way of change, and what it would simply regard with general approval. The tone of half-heartedness which runs through the Report is in itself a convincing proof that nothing of great moment has been detected which could be held to call for vigorous action, or has even provoked a strong opinion. The following are the principal "suggestions,"—some of them barely to be regarded even in that mild light—which the Committee throw out:—

1. The permissory adoption of the Scotch practice with regard to "emergency certificates" signed by *one* medical man to secure more prompt treatment in acute cases. If detention exceeds three days there must be a fresh certificate, signed by *two* independent medical men.

2. Substituting statutory declarations for loose statements in certificates.

3. A system of special reporting to the Commissioners from the case-books at fixed periods.

4. Certificates of insanity to remain in force for a limited period not exceeding three years.

5. "Orders" to be given by "a near relative, as in Ireland, or by some responsible person, who could be called to account," and the person signing "to visit the patient once in every six months."

6. The same procedure to apply to all patients, whether private or pauper, with or without property.

7. All single patients in private families, whether kept for profit or otherwise, to be confidentially reported to the Commissioners.

8. Personal visiting of patients by Commissioners acting after the manner of the Lord Chancellor's Visitors.

9. Workhouses to be grouped within certain areas, under some general management, so as to relieve asylums. This recommendation has for its object better provision for chronic and harmless cases, and the avoidance of the necessity of enlarging asylums to an extent which some witnesses deemed antagonistic to cure.

10. The Committee give a negative approval to the practice of voluntary return as boarders of patients who have previously been confined under certificates.

11. The private asylum question is left to be settled by the spontaneous action of the public.

12. The Committee approve liberty as a principle of treatment, and frequent visiting under proper restrictions.

13. The correspondence of patients to be less closely supervised, and notices posted in each ward setting forth the right of appeal to the Commissioners, and the privilege of letter writing generally.

These, with other references to matters of detail of no great moment, constitute the outcome of the inquiry. What remark may seem desirable we must for the present defer.

POOR-LAW OFFICERS AND ORDERS FOR NECESSARIES.

ONE of the most vexatious and trying positions in which Poor-law medical officers are placed is that of giving orders for immediate relief in extreme cases of illness and finding such orders neglected. Instances of this are frequently reaching us, and undoubtedly require more notice from the Poor-law authorities than is now taken of them. Some relieving officers seem to have but one idea—viz., to avoid in every way administering out-door relief, and to offer in its place an order for admission to the workhouse, and in so doing they are too frequently supported by the Boards of Guardians. An order for necessaries, such as beef or mutton, even if marked "urgent," receives no attention, and the relieving officer, thinking himself a better judge of the sick man's needs than the doctor is, takes it upon himself to substitute an order for the workhouse, no matter how ill the patient may be, or how far the workhouse may be distant. A most painful case of this kind has recently been investigated in South Devon. A man named John Helmore, fifty-eight years of age, received a medical order from the assistant-overseer at Dawlish, and was seen on the 8th of March by Mr. Parsons, who found that he was suffering from heart disease and asthma. Mr. Parsons gave him some stimulants and an order for mutton to make some broth. Of this order no notice was taken by the assistant-overseer. On the 11th the doctor gave him a second order, and marked it "important," and this was also disregarded, because the sick man had not been before the Board of Guardians. Mr. Parsons gave him the mutton himself, and supplied him with other little necessaries. The assistant-overseer now handed the man over to the relieving officer, who took upon himself to send the patient by train to Newton, notwithstanding that he had been told that such a journey would be dangerous, and that the doctor would not be responsible for the consequences of the removal. The assistant-overseer, who declined to give any out-door relief, even to the extent of 2 lb. of mutton, was able to pay his fare and give him 4*d.* to have a drop of beer and some tobacco. Can a greater satire on the treatment of our sick poor be conceived? A man is dangerously ill with heart disease, and is ordered food, which the officials who should administer relief decline to give on their own responsibility, but they can remove the patient, pay his railway fare, and give him beer and tobacco! The sequel is soon told. He was so exhausted by the journey that he arrived at the workhouse in a dying condition, with lividity of the lips and lower extremities, and died on the second day after his admission. We presume that the assistant-overseer made some mistake when he stated at the inquest that the Chairman of the Board of Guardians had said that he had acted quite rightly in the case. Some members of the Board, at all events, have a much clearer appreciation of what is due from them to the public, the sick poor, and their medical officer, and a committee has been appointed to consider the case, so that it may not be left in its present unsatisfactory condition.

THE ARMY MEDICAL SERVICE.

IN spite of the statement of Lord Bury, that only eight vacancies for medical officers in the army remain unfilled, and in spite of the further statement, that "the army is only sharing with the civil branches of the profession the difficulties of obtaining suitable men" (a statement which a reference to the October registrations will show to be directly contrary to the facts), there is no doubt whatever that the difficulties in getting good men to serve in the medical department of the army are very great indeed.

Instead of trying to recruit the army from the ranks of medical men who are already qualified, why does not the Government make an attempt to establish an army medical school in which their medical officers might receive their entire training and education? There would be no difficulty in selecting a sufficient number of young men who, after a competitive examination, might be drafted to a medical school, exactly as the combatant officers are sent to Woolwich or Sandhurst. In this way a young man would be trained not only in matters medical, but also, which is scarcely less important, in habits of discipline. It is well known that the restrictions of discipline fall very heavily upon a man of twenty-five or thirty who has hitherto spent a life of absolute independence; whereas a boy would pass naturally from the control of school or college to the control of an army medical school, and, never having tasted the absolute freedom which civilians enjoy, would not have that irresistible tendency to return to civil life at the first opportunity, which is one of the difficulties with which the War Office and the Admiralty have at present to contend.

Another advantage which might attend the adoption of such a scheme is that during war the army medical students would serve as dressers and in filling the minor appointments in the military hospitals. There should be no difficulty, with proper arrangements, in teaching the army medical student every branch of his profession most thoroughly, and we feel sure that, instead of there being on the eve of war "eight vacancies unfilled," the Government would be able to pick and choose among the most intelligent of our youth the most fitting persons to fill in the most efficient manner every post as it became vacant.

THE REGISTRAR-GENERAL AND CAUSES OF DEATH.

THE Registrar-General has recently issued to all his local officers his "official list" for 1878, in which appears a memorandum respecting the registration of causes of death, some provisions of which are not without interest to medical practitioners and the general public. The Births and Deaths Registration Act made it incumbent on registered medical practitioners to sign and furnish a certificate, stating to the "best of their knowledge and belief" the cause of the death of all patients attended during their last illness. It also provided that the jury should inquire into, and the coroner certify, the cause of death in all inquest cases. The Act, however, made no provision for obtaining satisfactory evidence of the cause of death in cases where no registered medical practitioner has been in attendance during the last illness of the deceased, and no inquest is held. As a certain number of persons die without having had any medical attendance during their last illness, and as their deaths are bound to be registered, the registrar is instructed that the "non-production of any certificate or written statement of the cause of death will not justify a registrar in refusing to register a death, except when a registered medical practitioner was in attendance, or where the death was sudden, or was occasioned by violence, or occurred under suspicious circumstances, in all of which latter cases notice must be given to the coroner." With regard to medical certificates issued by registered practitioners, it is stated that "no person is authorised by law to sign these certificates on behalf of any such practitioner, but the registrar is instructed that when he receives "a certificate purporting to be under the hand of a registered practitioner, it is no part of the registrar's duty (except he has reason for believing the signature to be a forgery) to question the truthfulness of any of the statements contained therein." If the certificate, however, states, or even infers, that the registered practitioner who signs it "was not himself in attendance on the deceased during the last illness," the registrar is instructed to enter the cause of death in the death-register, but the name of the certifying practitioner is not to be in these cases inserted in the register; in other words, the cause of death is treated as not certified, and the certificate is dealt with in the same manner as a written statement furnished by an unregistered or unqualified practitioner. While it is certainly undesirable to encourage the practice of granting medical certificates in cases which have not been "attended" by the certifying practitioners, it seems matter for regret that in cases in which no registered practitioner was "in attendance during the last illness," the name of a registered practitioner who is willing to accept the responsibility of certifying the cause of death should not be inserted in the register together with the cause of death. In such cases it might be stated that the certifying practitioner was not in attendance, but the cause of death can scarcely be said to be uncertified. In cases of written statements of the cause of death, signed by an unregistered practitioner, "whether such practitioner be qualified or not, or whether he be an assistant to a registered practitioner, or whether he be an irregular practitioner," the contents of such certificate or statement are to be regarded by the registrar merely as a part of the information tendered by the ordinary informant, and the "name of the person signing such document must on no account be recorded in the register." We have always maintained that when the State made it compulsory upon registered practitioners to furnish certificates of the causes of the death of their patients, the State should also have made provision for obtaining satisfactory evidence of all other causes of death; but in the present imperfect state of the law the Registrar-General, who is bound to secure the registration of all deaths, can but instruct his registrars to obtain the best available information, with which view the instructions above alluded to appear to be framed. We learn with satisfaction that the Registrar-General intends in future to publish statistics of the proportion of uncertified causes of death in different parts of England and Wales, which will afford some clue to the local proportions of unqualified medical practice.

MAN AND SCIENCE.

ALTHOUGH the *Nineteenth Century* continues its preference for politics, the current number contains two articles expressly devoted to the consideration of purely scientific questions, and one to that of the Good and Evil of Examinations. Deferring a notice of Canon Barry's remarks on examinations, and also of Professor Clifford's criticism of Professor Virchow's address at Munich on the Teaching of Science, we would call special attention to Dr. Elam's remarkably able paper on Man and Science, which is substantially a reply to Dr. Tyndall's address on Science and Man, delivered at Birmingham in October last, and published in the *Fortnightly Review* for November. Considered as a reply, Dr. Elam's lucubration may and will be variously estimated, but his position as to the relationship and interdependence of philosophy and science is unassailable. Accepting Mr. Lewes's definition, that philosophy is the systematisation of the conceptions furnished by science, Dr. Elam proceeds to inquire whether in modern biology a proper correspondence has been preserved between the generalisations of philosophy and the ascertained truths of science. The result of the inquiry is not flattering to the supposed acumen and perspicacity of some of the leaders of the modern modes of thought. While science teaches that all life originates from antecedent life, philosophy declares that there is no difference in kind between organic and inorganic nature. Science, again, affirms that neither by observation nor by experiment has the phenomenon of transition from one species to another been witnessed, and that the physiological characters of species are constant; but philosophy asserts that these characters are plastic, that species are not fixed but always becoming something else, and that all living beings have been derived from one or a few original forms of the simplest kind. Lastly, science avers that, whilst man approaches the higher animals in many details of his organisation, his essential nature is entirely apart from theirs, that he possesses faculties and endowments of which no germ or trace is found in the highest brutes, and that between him and them there is a vast gulf bridged over by no known living or extinct form; but philosophy maintains that man is *proximately* the lineal descendant of some extinct ape, and *generally* the result of the "interaction of organism and environment through countless ages past"—the latest link in an unbroken chain of mechanical development from cosmic gas to the protogenes, and from the protogenes to "our wormy ancestors," from these to the ascidian and thence to the anthropoid apes. This, which is a correct representation and no travesty of the existing relations of philosophy and science, may well afford matter for humiliation and reflection to those minds

which are apt to grow jubilant in contrasting the doctrine of modern science with the speculations of ancient philosophy.

THE DANGERS OF BREAD AND CHEESE.

A MODEST Swiss tradesman has recently set an example worthy of universal notice. Some Swiss medical papers have expatiated on the risks attending the sale of bread and cheese. The cheese is generally tasted by means of a knife, which is allowed to touch both the tongue and lips of the purchaser, but is rarely if ever cleaned. The Swiss do not remove the sample from the knife with their fingers, as is the custom in England, but thrust this implement into their mouths and then back again into other cheeses, thus conveying to them a slight but possibly dangerous moisture from the mouth. In the bakers' shops the small loaves or rolls are handled over and over again by the customers. The one seeks a soft, the other a hard crust, a new or a stale loaf. A multitude of individuals, who are not generally distinguished for their cleanliness, particularly in respect to their nails, where zymotic germs are scarcely exposed to the purifying influence of the air, press their thumbs down into a dozen or more rolls before they make a single purchase. Disease could thus be rapidly conveyed from one family to another. In all cases these facts, if they do not present a very grave national danger, are in no wise pleasing to the imagination; and we are glad to note that a baker, established in business at Basle, has publicly announced that henceforth he will not allow anyone to touch his loaves. On the other hand, he guarantees fresh and clean bread to all his customers—bread, in a word, which shall not have been manipulated by others than those who made it. This salutary measure is all the more essential as flour, and paste made from flour, are readily absorbent of dirt.

THE METROPOLITAN AND NATIONAL NURSING ASSOCIATION.

THE second report of this Association has been issued, and is a pamphlet of some sixty-two pages. The objects of the Association are good, and seem, in part at least, to have been attained. These objects mainly are, the provision of nurses for the sick poor in their homes, and the training of nurses for the work. To carry out these objects, £20,000 is needed, and an annual income of £5000. At present there is a central home in Bloomsbury-square, a northern home in the Holloway-road, a Paddington home, and an Eastern district. In the eighteen months ended Dec. 31st, 1877, the Association had nursed 1573 cases, which were thus distributed—viz., 572 by the central home, 270 by the Holloway establishment, 65 by the Paddington home, and 666 by the Eastern district association. We are not told how many visits each of these patients received, but we gather that each case remained rather more than sixteen days on the books. Each district is presided over by a superintendent, and Miss Florence Lees is "superintendent-general."

We do not find in the report a precise statement of the number of nurses employed by the Association, nor of the wages they receive, but we gather that £1810 18*s.* 1*d.* has been paid in salaries in eighteen months, and we further gather that "no less than 200 ladies applied for admission to the central home between Christmas, 1877, and the middle of January in the present year." If the applications continue to be at this rate, it is not surprising that the bill for office-work, advertising, and stationery is rather high—viz., £762 for eighteen months. The total payments for working expenses in the eighteen months amount to £5624; but it must be remembered that many of the expenses were exceptional, and such as must occur at the launching of an undertaking, but which are not likely to recur.

The Association seems to be doing good work, and we wish it every success, but we should advise that the reports for the future be a little less diffuse, and that foolish self-laudatory paragraphs, such as those on pp. 20 and 21, be excluded. The lecturers who instruct the nurses will not, we trust, allow them for the future to report cases of "cerosis" of liver and acute "tuberculosis." Such slips in these days of higher education are not creditable.

UNEQUAL LENGTH OF LIMBS.

WHEN Mr. Charles Reade has succeeded in producing an ambidextrous man, he may possibly devote his attention to a curious freak of nature, and attempt the correction of the inequality which has been found to exist in the lower limbs of members of the human family. From a series of observations that have been lately made in America, there seems to be no doubt that inequality of the lower limbs is not only common, but is the rule. In the Proceedings of the Medical Society of the County of Kings, we find it stated that out of over one hundred measurements made by Dr. Jarvis Dwight, of Brooklyn, inequality was found in more than three-quarters of the number, varying from one-eighth of an inch to one inch, averaging a quarter of an inch. These investigations are considered to throw light on the amount of shortening occurring after fracture of the femur, and to explain why the broken shaft is occasionally longer than its fellow. Dr. Hamilton, who at first questioned the accuracy of some of these observations, has since written a letter to Dr. Dwight on the subject, from which the following extract is quoted in the Proceedings:—

"I have done you and science an injustice, and I make haste to repair the wrong. Yesterday I for the first found time to verify by actual observation the correctness of your statement that the femora of most adults are unequal in length. In a dozen or more measurements, made with great care, a large majority were found of unequal length, and the left limb was generally the longest. I propose to extend my observations and to give them more precision, but I have made enough to satisfy me that you are correct."

SOOT.

THE discussion which has lately taken place in some of the daily journals relative to the important subject of ventilation brings one fact very prominently to the front, and that is that in our overgrown city the great obstacle to the proper ventilation of our houses is the amount of soot and other dirty particles in the air. It is well known that London housewives and London housemaids object to open their windows because of the shower of blacks which the incoming current brings with it, and builders and architects are discovering that the great objection to the system of ventilation by vertical tubes is that the strong draught brings its quota of blacks, which inevitably settle upon and disfigure the mural decorations and furniture of the apartments. How to counteract the evil of the blacks is an important question. No doubt this can be done by a system of washable filters, which must be removed and cleansed every few days; but would it not be better to go to the root of the matter at once, and try to prevent the soiling of the London atmosphere with soot? A few years ago we were almost selfish enough to hope that the steady rise in the price of coal would continue until we were one and all compelled to use it more economically, so as to have more heat in our dwellings and fewer blacks in the air. At present we are hoping that an increased use of gas both for cooking and heating may be found to have the double advantage of cleanliness and economy; and if it should be found feasible to employ the electric light for public illumination, the gas companies may be glad to push with vigour in the direction of any fresh outlet for their manufactures.

There is no doubt that most of the London houses

derive the greater part of the blacks which fly into them from the low houses in the mews which lie at the backs of all our chief streets. If a London builder wished to construct dwelling-houses which should be moderately cleanly, he would fit the stables entirely with gas apparatus for heating, or else use a proper system of smoke drainage for these small tenements, and build a few chimneys tall enough to deliver their smoke at least a little higher than the windows of the drawing-rooms or best bedrooms of the adjoining mansions. It is hopeless, we fear, in these days of personal liberty, to expect the Legislature to interfere with the right which we all have of soiling the atmosphere *ad libitum*, although our doing so militates very seriously against the health of our neighbours. It is well known that people with delicate lungs are unable to live in London because of the mixture of sulphurous acid and soot which they are compelled to breathe, notwithstanding that our town, being some degrees warmer than the country, and admirably drained, is in many respects well suited for such patients. A few years ago it may be remembered that during a dense fog the cattle at the show at Islington died in large numbers, and the death-rate in London rose to 48. This ought to be a warning, and we think the time is come when a Royal Commission might well be issued to consider the best way of cleansing the atmosphere of the richest and biggest city in the world, and of giving the dwellers in its houses a little tolerably fresh air, without the penalty of griminess which few can put up with.

THE PATHOLOGY OF RINGWORM.

THE paper by Dr. Thin, read at the last meeting of the Royal Medical and Chirurgical Society, raised some interesting questions. Kaposi, speaking of the various forms of ringworm, says that "in these cutaneous affections, the parasitic nature of which is universally recognised, even when the affection lasts for years, and is accompanied by extreme inflammation with production of pustules and cicatrices, the elements of the fungi have never yet been seen to penetrate beyond the layers of epidermis into the papillary layers, into the corium, nor into the lymphatics or bloodvessels"; and he thinks this constitutes a powerful objection against the phytogenetic pathology of the present day. A point at issue between Kuchenmeister (and we may now add Dr. Thin) and Kaposi, is that the former holds that the fungus only lives upon the effete and dead epidermal tissue, whilst the latter believes the fungus to spread down among the epidermic cells which are still in active growth; and, indeed, he gives a drawing showing this extension. He adds, however, that at present it is not precisely known what are the substances which the parasitic fungi take from the living tissues. Slight as the distinction appears to be, it is yet of primary importance. Indeed, upon it Dr. Thin has based his very reasonable hypothesis concerning the nutritive disorders set up by the growth of the fungus, as well as his explanation of the action of so-called parasiticides in the treatment of ringworm. Believing that the tricophyton derives its nourishment solely from the effete material of the horny epiderm and its appendages, he supposes an antagonism between the fungus and living tissues, to such an extent that the products of living matter, serum, &c., will actually kill the fungus. The latter also reacts in a peculiar way upon the tissues themselves. In its growth upon the dead matter some products must be set free; these in turn may act as irritants upon the surrounding skin, and set up the inflammatory changes so often seen associated with ringworm, and the histology of which was carefully detailed in the paper. The action of local irritants is to produce similar inflammatory changes, and the exuded material destroys the fungus. It remains to be explained why, if this be true, the inflammation set up by the fungus itself does not lead to the destruction of the latter, and thus more often result in spontaneous cure. We may hope that these theories will receive due consideration, and be fully discussed. An opportunity for reviving them will be afforded when Dr. Taylor makes his promised communication. It is essential they should be well considered and discussed, for they have wide general bearings upon pathology, and especially upon the occurrence of inflammatory changes in wounds, &c., which it is the object of the antiseptic treatment to prevent. Much light may yet be thrown upon such conditions attributed to the growth of organisms by the study of the effects produced by the comparatively grosser forms of vegetable life which are met with in ringworm.

"DOCTORS AND SICK CLUBS."

OUR contemporary, the *Globe*, comments on a letter published in a Birmingham journal, which shows that the average sickness in a certain provident club in that town amounted last year to a fortnight per head throughout, counting both sick and well, the remuneration of the doctor being only three shillings per member. The average duration of sickness among members who had gone on the sick-list was nine weeks. Our contemporary thinks the remuneration paltry, especially when it is considered that drugs have to be paid for out of it. It is due to sick clubs to say that most of them are more generous than the one which is under notice. But even the most generous of them and of the provident dispensaries have not yet fully realised the value of good medical service. We lately showed, in connexion with a model provident dispensary, that the remuneration was scarcely enough to pay the doctor a shilling for each visit paid to patients at their own homes, to say nothing of 9950 attendances on patients at his own house, &c. We are quite sure that sick clubs will find it to their advantage to pay their doctors well. Not only will good drugs be more surely forthcoming, but medical men, having respect to the necessity of living, will have more time to spare to attend to club patients.

ROYAL COLLEGE OF SURGEONS AND THE PROPOSED MEDICAL BILL.

A SPECIAL meeting of the Council of the Royal College of Surgeons was held on Monday last to consider the proposed Medical Bill. After a long and important discussion, certain resolutions were unanimously adopted; but as these resolutions are to be formally submitted to the President of the Council by the President and Vice-Presidents of the College, it was deemed desirable they should not at present be made public. Their purport was that the proposed Bill contains several clauses which require considerable modifications to render them acceptable, especially those relating to a conjoint examination scheme, and to the conferring of increased powers upon the General Medical Council at the expense of the examining boards. The Council were strongly of opinion that no conjoint scheme would be satisfactory that was not uniform and compulsory for the three divisions of the kingdom.

ROYAL SURREY COUNTY HOSPITAL.

WE have more than once within the last few months called attention to the financial difficulties which have overtaken the Surrey County Hospital, situated at Guildford, and urged its claims on the inhabitants of the district for increased support. At a recent meeting of the Guildford Guardians, the chairman, the Hon. Francis Scott, made some observations on the embarrassment under which the hospital suffers, which must claim the immediate and earnest consideration

of the supporters of the institution. It will, of course, be understood that we do not in any way identify ourselves with, or endorse the views of, the chairman, but we feel that it is right they should be made as public as possible. The chairman said that the struggling state of the hospital "was due to mismanagement. From the first it had never striven to obtain general support from the aristocracy of the county or the landowners of the district. It began as a Guildford institution, continued as such, and he was afraid it would remain the same. Moreover, in its administration it had not sought to widen the support it might obtain from the medical profession, and he knew there had been lavish expenditure which had called for the animadversion of the governors." He added "that the offer of amalgamation with St. George's Hospital, London, whereby they would have obtained the first medical skill of the country, was refused by the management." These statements, which we reproduce from the *Surrey Advertiser and County Times*, render it incumbent on the governors of the hospital to take early notice of the matter. The charge of "mismanagement" should be substantiated or refuted.

WOMEN AND THE BRITISH MEDICAL ASSOCIATION.

THE anticipation that the Birmingham meeting of the British Medical Association would end unsatisfactorily has been fully realised. As the meeting was specially convened on the requisition of the members of the Metropolitan Counties Branch, it would have been more courteous to have held it in London,—to say nothing of the fact that on a former occasion the Committee of Council had agreed that the metropolis is the most accessible and convenient spot for special gatherings. As it was, very few of the London members were able to be present, and Dr. Grigg's and Mr. Pemberton's resolutions were lost by considerable majorities. So far, the Committee of Council have got the best of it, a special vote of confidence has been accorded them, their past transgressions have been condoned, and indulgence granted for the future. But unless we mistake the temper of the body of members of the Association respecting the admission of female members, and some of the other questions which have been raised, the Committee of Council will have little cause ultimately to rejoice.

THE ACADEMY OF SCIENCES.

AT the meeting of the Academy on the 18th ult. a number of short communications were made, some of which were of considerable interest. Two had reference to "bacterial" questions. We lately called attention to the remarkable observations which seem to demonstrate that light is capable of arresting the development of bacteria. A correspondent of the Academy, whose name was not announced, affirms that motion is capable of exerting a similar sterilising influence. He asserts that if two flasks containing portions of the same liquid are inoculated with bacteria, and one is constantly agitated, while the other is kept still, the bacteria will develop in the flask which is at rest, and will not develop in that which is in motion. Another communication, by M. Toussaint, relates to the communicability of splenic fever. He asserts that the intensity of the disease produced by inoculation is proportioned to the number of bacteria contained in the liquid employed in the inoculation. This is a point of difference from most animal poisons, of which different quantities produce very similar effects.

Harvey made some observations on the first contractions of the heart of the chick, which have been the subject of further investigation by M. Dareste. If an egg is opened at the end of the third day of incubation the contractions of the heart stop, and recommence if the egg is placed in warm water. M. Dareste has endeavoured to ascertain how long the heart's action could be thus suspended without being permanently arrested. He found that after two days the contractions recommenced if the egg was placed in an artificial incubator. It thus appears that even in warm-blooded animals the phenomena of life may be arrested without being extinguished, just as in the case of the Rotifera.

Anticipations of the principle of the telephone seem to have been numerous enough. One was mentioned at the Academy. M. Charles Bourseuil, now inspector of the telegraph lines at Auch, is said to have mentioned, in a work published in 1854, the possibility of transmitting words to a great distance by means of two vibrating plates connected by an electric wire. He was discouraged from pursuing the subject further by the incredulity with which his suggestions were received. A new form of telephone was mentioned at the same meeting as having been lately devised by M. Antoine Bréguet (fils). It acts without pile or magnet; all that is essential is the connexion by a wire of two cups of mercury, and the transmission of words can take place. Further details of the instrument are not yet given.

The French pharmacists appear to have not yet succeeded in obtaining pure drugs. It was stated by M. Carnot that every specimen of subnitrate of bismuth tested contained lead.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.

OUR Wolverhampton correspondent writes as follows:—The Governors of the Wolverhampton and Staffordshire General Hospital have just held their twenty-ninth annual meeting. The report states that the total number of patients treated during the year has been 13,235, of whom 1389 (including 144 children under ten years of age) were received as in-patients, and 11,896 as out-patients; 916 of the former and 3646 of the latter were urgent cases, and were attended to upon their own application. The income of the year has amounted to £7157 0*s.* 5*d.*, while the expenditure has been £7882 18*s.* 7*d.*, leaving a deficit of £725 18*s.* 2*d.* During the past year many important, and it is considered beneficial, changes have taken place in the intern staff, not the least beneficial of which has been the appointment of a trained matron. A Medical and Surgical Reference Library, which has been for some time contemplated, will be shortly established. Mrs. Bell (in memory of her late husband, Dr. Peter Bell) has given £1000, the interest to be applied to the permanent endowment of the library. The same lady has added a donation of £50 towards the book fund. Mr. Edward Pugh, a member of the Weekly Board, has likewise given £1000 to provide the building. The library will be open to all qualified medical practitioners and their assistants.

The Hospital Sunday collection has just been received, and, in spite of the depressed state of trade, has realised £2024.

A CAUSTIC-HOLDER SWALLOWED.

THE application of nitrate of silver to the fauces is attended sometimes with other risks than those generally recognised. According to Dr. R. Demme, of Berne, a practitioner was lately cauterising the tonsils of a child, five and a half years of age, with fused nitrate of silver, fixed in a silver-plated caustic-holder, four inches long, when the instrument slipped from his fingers into the pharynx, and was swallowed before he could seize it again. It appeared to pass down the œsophagus without any special difficulty or distress. Large quantities of milk, oil, and melted fat were immediately administered. For the first few days constant vomiting occurred, and subsequently brownish mucus was ejected. Gradually, however, the vomiting ceased, and solid food was again taken. The motions during this time were liquid and offensive. Nearly three weeks after the accident

the caustic-holder was passed per anum, enclosed in thick masses of mucus. With the passage of the foreign body the symptoms, which continued those of alarming weakness, improved, the only remaining disturbance being the frequent occurrence of obstinate constipation. The case illustrates the great danger of making applications to the throat with a caustic-holder of insufficient length to permit of a firm grasp, especially when the patient is a struggling child.

PROFESSOR SCHWANN.

Nature for March 28th announces that in a few weeks a festival will be held in the city of Liège to celebrate the fortieth year of the professorship of Theodore Schwann, the author of the cell theory. Many persons will be surprised to learn that the founder of modern histology is not only alive, but is at the present moment actually teaching as Professor of Physiology in the Belgian University. The Committee charged with the management of the celebration desire the co-operation of scientific bodies and individuals in this country. It is further requested that letters intended to be read at the celebration may be forwarded either direct to the secretary, Professor Edouard van Beneden, Liège, or to Mr. Ray Lankester, Exeter College, Oxford. All Englishmen of science who have specially occupied themselves in the field of work opened by Schwann are begged to communicate individually with either of the above-named gentlemen, and to forward their photographs for insertion in an album to be presented to the founder of the cell theory.

THE PROGRESS OF BOTANY.

A BELGIAN journal of horticulture has given some curious figures showing the rapid increase in our knowledge of the vegetable kingdom. In the Bible about 100 plants are alluded to; Hippocrates mentioned 234, Theophrastus 500, and Pliny 800. From this time there was little addition to our knowledge until the Renaissance. In the beginning of the fifteenth century Gesner could only enumerate 800, but at its close Bauhin described 6000. Tournefort in 1694 recognised 10,146 species; but Linnæus, in the next century, working more cautiously, defined only 7294. In the beginning of this century, in 1805, Persoon described 25,000 species, comprising, however, numerous minute fungi. In 1819 De Candolle estimated the known species at 30,000. Loudon in 1839 gave 31,731 species, and in 1846 Professor Lindley enumerated 66,435 dicotyledons and 13,952 monocotyledons, in all 80,387; but in 1853 these had increased to 92,920, and in 1863 Bentley estimated the known species at 125,000.

POISONING FROM ACONITE AND BELLADONNA.

AT Worcester-cross, near Kidderminster, a man was last week killed by drinking a liniment composed of equal parts of linimentum aconiti and linimentum belladonnæ. It appeared that a party of men were drinking together in a public-house, and when they were partially intoxicated one of them picked his neighbour's pocket of the liniment and drank it. The deceased lived a few hours after taking the deadly dose. He was not seen by any medical man until death had taken place, and no post-mortem examination was made. The main facts of the case, however, were well attested.

INTRA-UTERINE INJECTION OF ERGOTIN.

ERGOTIN has been administered hitherto, by the general system, in order to secure its local action. An American physician, Dr. Ashe, states that he has employed it as an intra-uterine injection with great success in cases of post-partum hæmorrhage. He first clears out the blood coagula, then injects cold water, and then as quickly as possible a solution of about 12 per cent. of ergotin. The uterus contracts instantly, and no ill-result was in any case observed. The injection appears to produce no irritation.

ACCORDING to latest advices from the Cape (March 5th), the troops in camp near King William's Town, and, indeed, the inhabitants of the town itself, are suffering from epidemics of dysentery and typhoid. A correspondent who visited the town very recently reports that all sanitary precautions are well-nigh ignored. In consequence of the severe drought, which still continues, the stream that flows through the town is dried up, and its bed forms a receptacle for all varieties of solid and liquid filth. The place is overcrowded with troops and other persons engaged in this skirmishing war with the Kaffirs; no baths can be had anywhere on account of the scarcity of water, and the condition of many of the house latrines is eminently disgusting. Hence it is not surprising that typhoid and dysentery are prevalent; and, as green food is very scarce, scurvy will in all probability soon be added to the other ills. The Cape colonial authorities have not as yet seen the wisdom of appointing sanitary officers in their chief towns.

A NEW Medical Bill has been presented to the American Legislature providing for the registration of all persons now lawfully practising medicine and surgery, and prohibiting anyone from hereafter commencing practice unless he shall have the degree of doctor of medicine. Our contemporary, the *New York Medical Record*, speaks of the measure in terms of satisfaction. At present persons can be licensed to practise by the censors of any of the county societies in the State of New York. As there are sixty-four counties, and each county is entitled to three societies, it will be seen that there are nearly two hundred licensing bodies in the State. The evil of having nineteen licensing bodies in our own country is one which it has taxed all our efforts to endeavour to remove, and we only now see a prospect of having one portal to the profession of medicine. We wish the medical reformers of America success in their attempt to crush the hydra-headed monster which encumbers them.

THE deaths in London, which had numbered 1676 in the week ending March 23rd, rose last week to 1766, the increase being chiefly attributable to the comparatively low temperature that prevailed, as manifested by the large mortality resulting from diseases of the respiratory organs, to which 421 deaths were referred. Whooping-cough was the most fatal of the zymotic diseases, accounting for 158 deaths, small-pox for 48, measles for 35, scarlet fever for 47, diphtheria for 12, different forms of fever for 28, and diarrhœa for 11.

THE Senatus Academicus of the University of Edinburgh have received £2000 under the will of Andrew Robertson Cameron, M.D., of Richmond, New South Wales, "the proceeds of which are to be given in each and every year to the practitioner or member of the medical profession who shall be judged to have made the most valuable addition to practical therapeutics during the year preceding."

DR. DEAN, the local medical officer of health, has drawn the attention of the Burnley School Board to the fact that more than a fourth of the deaths in that town in the past month have been caused by diseases such as measles and scarlatina, and has asked the Board to co-operate with him in the endeavour to arrest the spread of infection.

DR. ROBERT SCOTT ORR has been appointed representative of the Faculty of Physicians and Surgeons of Glasgow, on the General Council of Medical Education and Registration for five years, vice Fleming, resigned.

IN illustration of the continuous increase of small-pox in the metropolis during the past few months may be quoted the number of patients in the Metropolitan Asylums Board Hospitals. In October last there were 161 cases under treatment; in November the number had increased to 194; in December, to 297; in January, to 405; in February, to 556, while in March the number was 667. Since the last return a very slight decrease is reported—a sign, we trust, that the epidemic has nearly spent its force in London.

THOSE useful institutions for the treatment of the sick in rural districts, cottage hospitals, are being rapidly multiplied throughout the country. It is proposed to establish a hospital at Thames Ditton, and a sum of £500 has already been obtained in aid of the building fund. The district is a wealthy one, and there should be no difficulty in establishing and maintaining the institution.

MR. WALTER PYE, M.R.C.S. Eng., late house-surgeon at St. Bartholomew's Hospital, and Lecturer on Physiology at St. Mary's Hospital, has just been appointed Anatomical Assistant in the Museum of the Royal College of Surgeons, in the vacancy occasioned by the resignation of Mr. G. A. Wright, of Guy's Hospital.

SIR ALEXANDER ARMSTRONG, K.C.B., F.R.S., Director-General of the Medical Department of the Navy, has been appointed to the Commission of the Peace for the county of Middlesex and the City and Liberty of Westminster.

MR. CANTON, who has been for the past forty years medical teacher at Charing-cross Hospital, has resigned. The present and past students of the hospital have resolved to present him with a testimonial.

REPORT
OF
The Lancet Special Commission
ON THE
VENTILATION OF THE LAW-COURTS.

THE agitation concerning the unwholesome condition of the Police-courts has justly suggested that the atmosphere of the Law-courts, if less objectionable, is, nevertheless, far from pure. These Courts are larger, less crowded, and are frequented by a class of persons whose approach is not signalised by the strong odours which characterise a Police-court crowd. Nevertheless, a great number of letters have been written to the papers during the last few weeks by "suffocated barristers" and others whose business compels them to spend much of their time in the close air of the Law-courts, and, as our investigations will serve to prove, there is good cause for this outcry. We naturally commenced our inquiry at Westminster, where every facility was given us by the officer in charge of the warming and ventilating arrangements, Dr. John Percy, F.R.S. Theoretically, the Houses of Parliament and the Law-courts of Westminster are placed, in this respect, under the same authority, and, at first sight, it must seem strange indeed that, while the Houses where our laws are made are warmed and ventilated in a most admirable manner, the Courts where these laws are enforced still contain air contaminated with every impurity. This anomaly is, however, but another illustration of the evils that arise from divided authority. Taken as a whole, and with one or two exceptions, to which we shall subsequently refer, the Law-courts of Westminster have ample means of ventilation. These have been based on scientific principles, and are managed with commendable care in matters of detail. Of course, if the Courts had been entirely rebuilt, better contrivances would have been applied; but, considering the circumstances of the case, good use has been made of the poor elements in hand.

It is scarcely necessary for us to describe the ventilation of each Court. With the exception of the Admiralty Court and the two Vice-Chancellors' Courts, the methods employed are very similar. There are underground passages which serve as intakes for the air. These are whitewashed before each term, and cleaned every week. "Gurney's batteries" are situated at different intervals in these passages to attract and warm the air previous to its entrance to the Courts above. We should perhaps explain what are termed "Gurney's batteries." Four enormous steam boilers, 7 ft. in diameter, 28 ft. long, supply steam to a system of pipes running all over the eight acres of ground which are occupied by the Houses of Parliament and the Law-courts. These steam pipes have an aggregate length of fifteen miles, and are regulated by about 1200 stop-cocks. The "batteries" consist of from 50 to 100 metallic plates, measuring about 10 in. square, soldered on a steam-pipe at a distance of about two-thirds of an inch one from the other. These plates are gradually warmed by the steam, and attract a current of air through them which is heated, but not to an excessive degree. Some of the "batteries" are placed under the seats and floor of the Courts, so that their influence may be more emphatic. Innumerable openings under the seats, under the floor, in the side of the walls, admit this pure but warmed air into the Courts. We tested one of these openings under the seats of the Court of Queen's Bench with the same delicate air-meter made by Mr. J. H. Stewart, which we mentioned in our report on the Police-courts, and found the pure air entering at the rate of 70 cubic feet per minute. There were ten similar openings where the current was equally strong, and forty or fifty others higher up, and where the air did not travel so rapidly. This air came from St. Margaret-street, and was therefore exceptionally good, the Abbey being opposite to the intake. Another intake, supplying the Lord Justices' Court, was not so well placed. It came out into an area where a dust-bin is situated immediately opposite, at a distance of less than three yards. In the underground passages we found a very small furnace, and ascertained that its object was to draw the foul air by means of a flue from the closet attached to the Bail Court, and to ventilate another dust-bin close at hand. That a furnace should be kept constantly alight and a system of flues constructed to ventilate one closet and a small dust-bin, is certainly a proof of scrupulous care; but we should have imagined some more economical and less elaborate method might have been contrived, and a place found for the dust where artificial ventilation would not be necessary.

The underground passages, the attractive power of "Gurney's batteries," the large intakes, and the numerous apertures giving into the courts, would ensure an ample supply of good air, if, on the other hand, ample means were forthcoming for the exit of the foul air which it is proposed thus advantageously to replace. To ascertain this important point, we left the subterranean passages, entered the Courts themselves, and, better still, clambered on the roofs above the courts. The windows and doors we will not describe; they do not enter into the scheme of ventilation. The doors often admit foul air from the passages outside, while the opening of the windows would, in some instances, entirely destroy the ventilation of the Court. The air-shafts, the sun-burners, and the lanterns on the roof are the real points of interest. The size of the lanterns varies from about three to five yards square, according to the Courts over which they are situated. They are of course made entirely of glass, supported by a framework, and can be opened in all directions; but their original object was rather that of giving light to the Court. Indeed, with a view of preventing, or at least for the purpose of better regulating, ventilation by this means, horizontal panes of glass have been placed on a line with the ceiling of the Court, and when these are closed they cut the lantern off altogether. Thus, the lantern, while giving the Court a lofty appearance, and admitting a large volume of light may in all other respects be considered as a separate construction. The exit for the air consists of a large aperture placed in the ceiling immediately under the horizontal panes communicating with a

lofty shaft, which is properly surmounted by a cowl and provided inside with circular gas burners to create a draught. When the lantern is shut off from the Court by the horizontal panes of glass, when all the windows are closed, there is a steady regular current of air coming in from below, where it is duly warmed, gradually ascending through the assembled throng, and finding its way out by the shaft built expressly for this purpose. Such is the system, and if it were allowed a fair trial, we should doubtless have been spared the many complaints that constantly reach us.

Unfortunately, according to custom established long before we possessed any knowledge of the difficulties and the importance of ventilation, the judge has been allowed to exercise despotic sway over all that relates to the Court where he presides. Peers and members of Parliament are content to allow specialists to watch and organise the ventilation of the two legislative Houses, but a judge ventures to throw sanitary science to the winds. He orders windows to be opened, ventilators to be closed, turns on the hot air, then the cold, sets the draughts at liberty to effect possibly indescribable mischief, suffocates one section of the Court, inflicts rheumatism on another, and brings about all the collisions, the blocks, and other incalculable accidents which would result at, for instance, Clapham Junction, if totally inexperienced men were appointed as pointsmen to regulate the railway traffic. Though imbued with the profoundest respect and admiration for the integrity and learning of our judges, we beg to submit that elevation to the Bench does not in itself testify to a knowledge of sanitary engineering. It is, indeed, the interference of the learned judges themselves which has caused the most mischief. Thus we saw an order, signed by a celebrated judge, commanding that all the traps in his Court should be closed. This at once entirely stopped the carefully-contrived supply of pure and warmed air. When the ingress is blocked, the exit of air is reduced in proportion, and the Court becomes very close. It was under these circumstances that Dr. Angus Smith analysed air taken from the Court of Queen's Bench, and pronounced it to be as corrupt as the air of some of the worst factories in England. This occurred some ten years ago, and Dr. Percy then wrote an official letter stating that he declined to be responsible for the condition of the Courts if the judges interfered with the ventilation. Notwithstanding this protest, the grievance has continued, and the systems of ventilation are still often interrupted and destroyed by order of some of the judges. The differences noticed in the various Courts are not due to their construction, but to the extent of interference exercised by the presiding judge, and as there are, including the Wreck Commissioners, eighteen judges, much diversity may be perceived in the nature of the atmosphere.

At one notable trial, held in very hot weather, the doors and windows were carefully shut, and air artificially cooled was admitted into the Court. But the judge objected to this artificial and scientific method. He at once closed the traps; the pure, cool air was excluded. In a few moments the heat became unbearable, and his Lordship then ordered all the doors to be thrown open, and air ten degrees warmer than that which he had previously enjoyed came in. As this air became vitiated it travelled up the shaft, and was removed from the Court. The heat, however, was still intolerable, when the judge suddenly noticed that the horizontal panes carefully separated the Court from the lantern above, reducing, as he imagined, its air-supply. This, of course, seemed preposterous, so orders were given to have the panes withdrawn at once, and, further, all the windows of the lantern were to be opened. The consequence was that the air rushed into the lantern, but as it descended towards the Court it was attracted by the current going up the shaft, which has its opening close to the entrance of the lantern, and was thus carried up to the cowl and shot out on to the roof of Westminster Hall, where, as may be imagined, there was no one to enjoy the benefit of this eccentric ventilation. In the meanwhile, the utility of the shaft, which had been previously useful in drawing up the foul air from the Court, was now entirely neutralised, and all its power monopolised in conveying away the nearer and stronger current of pure air coming from the lantern, and bestowing it on the neighbouring tiles and chimney-pots, while judge and audience below found that after all they had but exchanged the frying-pan for the fire. When the Court where this utter breakdown occurred had adjourned the whole ventilating apparatus was set properly in motion for our observation. We proceeded to measure, by the instrument already mentioned, the volume of air passing up the shaft from the Court, and found it not less than 4000 cubic feet per minute. Had the Court been full and hot the draught would have been greater, but even if this were not so, 4000 cubic feet of air per minute gives an allowance of 1000 cubic feet per hour to each of the 240 persons whom, at this rate, this much-abused Court could accommodate without the least inconvenience.

There is another point which we should not omit to mention. At the four corners of the lanterns skeleton frames have been fixed with Venetian valves of brown holland. These "butterfly" valves are so constructed that they lift upwards in answer to the slightest pressure from inside. Thus, when the horizontal panes are removed, and the foul or hot air ascends from the Court below, it lifts the brown holland valve and escapes on to the roof; but if, on the other hand, the pressure is from the outside it tightly closes the valves. There is consequently no down-draught possible—no interference with the action of the shaft, but a ready means of supplementing that action, if insufficient. We watched the action of these "butterfly" valves with great interest, as they possess all the charm that distinguishes the happy combination of simplicity with efficiency. It will scarcely be credited that some of the judges have conceived a mortal enmity to this ingenious contrivance. They will not be troubled to perform the easy and safe ascent to the roof to convince themselves that the valves do not produce a down-draught, and to watch how admirably they act; but, in one or two instances, have ruthlessly ordered their destruction. At one Court only one of the four valves remains intact: the valve is situated in a corner where the judge cannot see it, and therefore he ignores its existence!

Apart from all these objections, it must also be borne in mind that the Courts are at times so overcrowded that even the most perfect system would prove ineffectual; and, as Dr. Percy states in a parliamentary report on the subject, it is impossible "to ventilate a barrel full of red herrings." For instance, the Bail Court, if we make deductions for the bench, bookcases, irregularities of shape, &c., can scarcely contain 15,000 cubic feet of air, yet there are seats for about a hundred persons, and so much standing room that perhaps a hundred and fifty more visitors &c. might be crowded into the Court. The entire atmosphere of this Court should therefore be changed, on such occasions, from fifteen to twenty times per hour—an undertaking fraught with considerable difficulties. It was suggested that Tobin's system should be applied here, and we are informed that two years ago Mr. Tobin's representatives took the necessary measurements; an estimate of the cost was then required, but up to this date no answer has been given.

The Court of Divorce is also often greatly overcrowded, and is particularly attractive to visitors. It contains about 24,000 cubic feet of space, but does not possess a ventilation-shaft, and the exit of air takes place, therefore, chiefly through the Venetian valves in the lantern. There is much to be said also with regard to the cleanliness of this Court. The accumulation of dust and dirt in the gallery, over the awning that covers the bench, and, in fact, in the various out-of-the-way nooks, is most reprehensible. We ascertained that the Office of Works must preserve the cleanliness of the Court during the vacation, but that during term-time the Court-keepers are responsible for this work. Poor women are engaged to come in and dust, &c. Perhaps they are insufficiently paid. In all cases the dusting is inefficiently done, and the dust of a Law-court is more especially offensive and dangerous. While alluding to this subject, we would also protest against the employment of fluffy red and green cloth in Law-courts. The cloth curtains, the desks covered with this substance, are all so many refuges where zymotic germs can more easily retain their vitality, and must occasionally fall on the persons who pass by them. The whole furniture of a Court should consist of substances, such as leather, which can be wiped daily with a cloth moistened in some antiseptic solution. The walls should be glazed, and the floors covered with kamptulicon instead of carpet, or matting, so that both may be constantly washed.

The Admiralty Court and the two Vice-Chancellors' Courts are the exceptions to which we alluded at the beginning of this report. They are little better than ordinary rooms, and were only converted into Courts as an afterthought. The two Vice-Chancellors' Courts are situated one above the other, are in every respect similar, and each contains about 8000 cubic feet. The ventilation depends almost entirely on the windows. Perforated zinc, a yard square in the centre, allows the air to escape into a shaft; but there

is no burner to create a draught, though it certainly carried some smoke away when an experiment was made. Openings under the windows might admit air which would be diffused under the seats, but a steam coil which passes along the floor is out of order; it can therefore create neither heat nor draught, and the air fails to come in. Fortunately these Courts are rarely crowded.

The inappropriate construction of the Admiralty Court is a matter of graver importance. Here many complaints are made; and the sailors who frequent this place often leave behind them living testimony of their presence. The windows, and the door that leads out on to the staircase, are the only means of ventilating this Court. Some of "Gurney's batteries" are placed under the windows, and might be of great use in attracting the outer air and warming it if a small aperture had been made in the wall. Under the actual circumstances they create warmth, but do not assist the ventilation. A window in the gallery is very useful for this purpose, but caused a dangerous down draught. This Court measures about 14,000 cubic feet, and is, therefore, comparatively small, though its sittings attract a large number of persons, and we certainly think that, notwithstanding its unsuitable position, means might be found to provide a better and more regular supply of fresh air.

When from Westminster we travelled on to Chancery-lane we soon perceived that we had left all approach to scientific ventilation behind us. The Rolls Court, it is true, boasts of a large intake of air, which, after passing under the building, is warmed over a furnace, and then allowed to enter the Court above; but this intake has never been cleaned; the wires that protect its entrance are thick, and clogged with the dust of ages, instead of being dusted every week and the air-passage whitewashed twice a year at least. This Court has also a ventilating sun-light, where the gas is kept burning all day long—a precaution, however, which is taken to ensure the rapid illumination of the Court during fogs, &c., rather than for the purpose of extracting foul air.

The two Vice-Chancellors' Courts at Lincoln's-inn are, probably, the worst of all. They measure about 15,500 cubic feet. Semicircular windows under the ceiling can produce a through draught if the Court were cleared, but would be too rough and violent, or else, if not opened enough, an insufficient means of ventilation. The sun-light is the only attempt worthy of consideration, and this is too small, so that there remains but the entrance door, which, as it is constantly swinging backwards and forwards, is probably the most effective ventilator. A construction like a stove covers hot-water coils, and emits heat. This assuredly might have been rendered of use. An aperture behind or at the sides might have been made, so as to introduce fresh air, which would have been warmed as it passed through the coils. This Court is of easy access to the public, and stragglers are constantly overcrowding the standing room.

Close at hand, Vice-Chancellor Malins' Court is somewhat larger, and might be better ventilated but for the fact that the ventilators have been carefully covered over with matting and oil-cloth. We tested these ventilators, and found that they were producing good currents of air, which travelled backwards and forwards with great activity, but all this took place under the floor of the Court, and could not benefit a single person suffocating above.

The Court of Appeal is so large, so amply provided with windows on both sides, and so little frequented that we need not stop to find fault here; but we cannot conclude this report without saying a few words concerning Justice Fry's Court. It is a small, cheerless room, under the library, with but poor windows and poor light. An aperture, high above the fireplace, on the right of the judge's seat, and opposite the entrance-door, draws the foul air away. Gas burning inside this ventilator caused the air to travel out of the Court at the rate of over 200 cubic feet per minute when we took our observations, that is almost immediately after the Court had adjourned, and while the room was still hot. Air can be let in from the windows by means of swing-sashes, which are fixed the wrong way up, so that they throw the air down on the heads of the persons below instead of throwing it up towards the ceiling. As a natural result, these windows are rarely used. The door being immediately opposite the one powerful ventilator in the Court, a through draught is, of course, created, and this possibly accounts for the elaborate curtain arrangement which surrounds the entrance and checks its effect as a ventilator. Further, it is almost impossible to pass through unless the thick cloth curtain touches the clothes of each person entering or going out. The curtain may therefore be looked upon as a ready-made method of conveying from one person to another some of the germs of disease that are brought into the Court. As hundreds of persons brush past this clinging cloth every day, it must occasionally catch up some injurious germs. Such contrivances should not be allowed in places of public resort. In matters of detail, therefore, as in the more important questions of general construction, there is, it will be seen, urgent need of reform; and we trust that the melancholy experience of the past and present will not be lost on those who will be responsible for the ventilation of the new Law-courts.

EFFLUVIUM NUISANCES.

I.

DR. BALLARD'S report on effluvium nuisances, published in the appendix to the recently issued Report of the Medical Officer of the Local Government Board for 1876, gives the results of the first part of an inquiry concerning industrial nuisances generally. The nuisances which come within the scope of the inquiry relate to—(*a*) the keeping of animals; (*b*) the slaughtering of animals; (*c*) other branches of industry in which animal matters or substances of animal origin are chiefly dealt with; (*d*) branches of industry in which vegetable manures are principally dealt with; (*e*) branches of industry in which mineral substances are principally dealt with; and (*f*) branches of industry in which matters of mixed origin (animal, vegetable, and mineral) are dealt with. The present report refers to the three groups of offensive industries first-named.

This summary enumeration of the subjects of the inquiry scarcely conveys an accurate impression of its magnitude and importance. It is not, indeed, until we have before us a statement of the several industries included in the inquiry that we fully realise its great extent, and the vast gain which will arise from it to sanitary authorities and their officers, and to sanitary workers generally. An inquiry of that sort, to fulfil all that is to be desired from it, could only be prosecuted by a Government department, and only prosecuted by such a department successfully on condition that it should be carried out on the principles and in the fashion inaugurated officially by Mr. John Simon, which have so long been adopted by the Medical Department, first of the Privy Council Office and then of the Local Government Board. Of this fashion, as represented by the agents who have carried it into operation, Dr. Bowditch, of Massachusetts, said in the Centennial Discourse delivered before the International Medical Congress in Philadelphia in 1876, "I hesitate not to say that the keenness of investigating powers attained by the body of inspectors in Great Britain, under the direction of Mr. Simon, is wholly unequalled and unprecedented, I suspect, in all past time. And these inspectors are permeated with the enthusiasm and accuracy of modern science. One of my scientific friends said, when reading vol. 2, new series, of Mr. Simon's Reports to the Privy Council and Local Government Board, he felt as sure of the results brought out as he did of those derived from the 'most careful chemical analysis.'" But it does not impute any discredit to the men, and they, we hesitate not to say, are the first to avow it, that it might not be given to the Medical Department at all times to furnish a man competent to prosecute in all its phases an inquiry such as that now in part completed by Dr. Ballard. It is an inquiry only possible to a man who combines in himself the knowledge of the experienced hygienist, of the advanced physician and pathologist, and of an accomplished chemist, together with an exceptional aptitude of mastering an infinity of mechanical and technical details peculiar to particular industrial processes. Few men among us possess rare qualifications of this sort, and among the few Dr. Ballard stands pre-eminent.

Dr. Ballard prefaces his report with some observations on the extent and degree of public inconvenience from industrial nuisances, the classification of offensive businesses, the senses in which industrial nuisances may be regarded as injurious to health, the means of preventing or minimising industrial nuisances morally feasible, and the difficulties of local authorities in dealing with such nuisances.

Few questions present greater difficulty than that of the influence of offensive effluvia upon health. With regard to the greater number of these effluvia the evidence does not lie upon the surface, and is only to be obtained by carefully conducted differential examinations among populations where industries productive of such effluvia exist. Examinations of this sort have as yet been of the rarest, and they do not, on account of the great amount of time they would occupy, form a part of the inquiry. Although from this point of view the inquiry may be held to be defective, there is not wanting a sufficiency of evidence to show that certain of the offensive effluvia must necessarily act injuriously on the health of persons and communities exposed to them, and the conditions under which such effluvia act most injuriously. This is especially true of the offensive effluvia connected with the keeping of animals and with the industries dealing with animal substances in a state of putrefaction. Dr. Ballard gives typical instances in support of this position, and deals with the whole question in a luminous argument.

With respect to the prevention of industrial nuisances, he observes, in his prefatory remarks, that "the tendency of the inquiry is towards establishing this point—namely, that all, or nearly all, the trades now causing offence from the diffusion of effluvia may be so carried on as not to cause offence at all, or only offence of such a trifling nature as may well be tolerated by persons who live in communities.

The particular offensive businesses treated of in this part of Dr. Ballard's report are horse-keeping, cow-keeping, pig-keeping, the slaughtering of animals for food, the slaughtering of horses, the curing of bacon, the curing of fish, the frying of fish, the trade of fellmonger, leather dressing and parchment making, tanning, and the preparation of jackass' hides; the manufacture of glue and size; the manufacture of prussiate of potash; the boiling of flesh, tripe, trotters, ox feet, &c.; the preparation of neat's-foot oil, and the trade (sometimes associated) of preparing glue pieces; the manufacture of fish-liver oil, fat melting, dip-candle making, the manufacture of soap, the manufacture of articles of commerce from blood, gut-scraping, gut-spinning, the preparation of sausage skins; bone boiling, and bone-size making; the manufacture of animal charcoal and sulphate of ammonia from bones; the reburning of animal charcoal; and the manufacture of artificial manures.

The course taken by Dr. Ballard is to describe carefully the processes followed in the several businesses, to indicate such effects of the offensive effluvia arising from them as have been ascertained, and next to show in detail the means of preventing the nuisance from the effluvia. The report thus becomes a complete handbook of the hygiene of the several businesses to which it refers. We had almost written "an exhaustive handbook," but there is an omission early in the report which forbids the use of that term with regard to it, but which scarcely detracts from its completeness. It is in the section treating of pig-keeping. Dr. Ballard has penned an indignant and almost pathetic defence of the pig against the popular charge of uncleanliness, but he makes no reference to the highest advance in brute civilisation which this useful animal has yet attained. We refer to the application of the dry-earth system to avert nuisance in his domicile. This system, in its application to piggeries, is, we believe, to be studied at Hereford, on the grounds of the Society for Aiding the Industrious. There may now or was lately to be seen a palatial range of piggeries, with its porcine population in a state of cleanliness and freedom from stench which would have rejoiced the obviously sympathetic heart of Dr. Ballard, and furnished him with an instructive moral when called upon to address local authorities on filth-nuisances and diseases.

We shall recur to this report.

THE BRITISH MEDICAL ASSOCIATION.

MEETING IN BIRMINGHAM.

AN extraordinary general meeting of members of the British Medical Association was held at the Queen's Hotel, Birmingham, on Tuesday.

The first business was the consideration of a resolution, proposed by Dr. GRIGG (London): "That this meeting is of opinion that the reports of the proceedings of the Committee of Council should be published in as complete and intelligible form as is consistent with the conduct of business, and that in no case should important resolutions affecting the general interests of the Association be omitted."

Dr. ROGERS (London) seconded the motion.

Mr. GAMGEE (Birmingham) moved, as an amendment, "That it is necessary, for the successful conduct of the business of the Association, that the publication of the reports of the Committee of Council should be left to the discretion of the Committee of Council."

Mr. WATKIN WILLIAMS (Birmingham) seconded the amendment.

Dr. ROGERS supported the resolution.

Dr. Grigg having replied, the amendment proposed by Mr. Gamgee was carried by a large majority.

Dr. GRIGG next moved, "That this meeting desires to express its opinion that, in the selection of a house for the Association, it is desirable that the council, committee, and consulting rooms should be separate from the printing and publishing offices."

Dr. DAY (Stafford) seconded the motion.

Mr. HUSBAND replied to Dr. Grigg, and defended the course pursued by the Council. He moved an amendment affirming that the arrangements contemplated by the Committee of Council in leasing the premises were of a nature to promote the successful conduct of the business of the Association.

This was seconded by Mr. OAKES (Birmingham).

Dr. ROGERS supported the resolution.

Dr. B. FOSTER supported the amendment, which, after a protracted discussion, was carried.

The next subject on the notice paper was to consider the privilege of lady members, but the CHAIRMAN said that as the gentleman who was to have introduced the subject was ill, and the hour late, the matter would be deferred till the annual meeting.

Mr. O. PEMBERTON said he wished to move that a sub-committee be appointed to consider the question of lady members, with the power to obtain counsel's opinion, and to report to the annual meeting.

Professor LISTER seconded the motion, and said that if carried it would prevent the matter being brought forward for discussion in a crude manner.

Mr. GAMGEE said he would move, as an amendment, that the Committee of Council be requested to take counsel's opinion as to the rights of lady members, and report to the annual meeting. He concurred that it was desirable to take legal opinion, but seeing that the fullest confidence had been expressed in the Committee of Council, he did not see the necessity of appointing any other committee.

Mr. V. SOLOMON seconded the amendment.

Mr. PEMBERTON said his only objection to the amendment was that the Committee of Council had been singularly reticent in taking any steps until the subject was raised by such distinguished members of the profession as Dr. Jerrard, Dr. Bennett, and Professor Lister. He should prefer, therefore, that an independent committee should be appointed.

Dr. WADE said he must say a few words in defence of the Committee of Council. He entirely repudiated the suggestion that that body had shown any want of energy. The first lady member was elected, not by the Committee of Council, but by the Metropolitan Counties Branch, of which, he believed, some of the gentlemen who had been prominent lately in opposing the very existence of lady members, were members at the time of the election. Some years elapsed during which no exception whatever was taken to the election, and the Committee of Council were not asked to abrogate it, or take any steps with reference to it. The tacit consent of the Association was thus given to what had been done by the Metropolitan Counties Branch. When the second lady applied for admission she applied to the Committee of Council. The Committee of Council, feeling, as he thought, rightly, that the election of the previous lady had been sanctioned tacitly by the Association, proceeded to elect the second lady member. At the Edinburgh meeting the question of lady members was raised, on the motion of Mr. Pemberton, seconded by Dr. Marshall. By their resolution the general secretary was directed to obtain the vote of the Association upon the question of lady members in a particular way, and report the result to the next annual meeting. Up to that meeting the Committee of Council had no official cognisance of what the result had been, and at that time it was too late to propose any new bye-law, because certain notices were required. The Committee naturally supposed that the gentlemen who had taken up the matter

would themselves have given notice to propose any new bye-law which they might desire, in accordance with the result of the vote which had been obtained. Instead, therefore, of there having been any negligence on the part of the Committee, the negligence, if any, had been on the part of Mr. Pemberton and his colleagues. They were perfectly within their rights at the Edinburgh meeting; but rights carried duties, and it was their duty either to bring forward a bye-law themselves or ask the Committee of Council to undertake it. To appoint a special sub-committee to consider the question, as proposed in the amendment, would be to cast a slight upon the Committee of Council, which their conduct had not deserved.

Mr. EASTWOOD said that the following resolution had been passed by the Committee of Council on his motion, seconded by Dr. Grigg, "That the Committee of Council is of opinion that women should not be admitted as members of the Association, and that a bye-law be submitted to that effect to the annual meeting." The Committee of Council had not been remiss in the matter, but had acted upon it so soon as they had seen any need to act. On the other hand, he did hold that the proposer and seconder of the resolution at Edinburgh were guilty of not having acted up to their convictions in failing to propose a new bye-law at the last Manchester meeting. The Committee of Council had now committed themselves to frame a bye-law on the subject, but not to touch the rights of the present members.

Mr. PEMBERTON said that his idea was that ladies had no rights under the existing constitution of the Association.

The Chairman was about to put the amendment, when Mr. Lawson Tait submitted that it was not competent to discuss or take away the rights of those who were already members. The Chairman, however, ruled that the amendment was a proper one, and on this being put it was carried by 40 votes against 38. The amendment was then carried as a substantive resolution.

On the motion of Mr. Gamgee, seconded by Mr. Husband, a vote of thanks was passed to the President for his conduct in the chair.

PROVIDENT DISPENSARIES.

AT a meeting of the Charity Organisation Society held on Wednesday afternoon at Willis's Rooms, Sir William Gull moved—"That this meeting is of opinion that the establishment and extension of provident dispensaries is one of the most important means of developing self-reliance, and improving the condition of the people, and accords its support to the Society in its efforts in that direction." His long experience of the poorer classes of London had impressed him with a conviction that the more serious cases of illness could not be attended properly on the present system of out-door relief, and that provident dispensaries would alone meet the constant demand for medical treatment. Moreover, by the thorough organisation and extension throughout the metropolis and elsewhere of these excellent institutions, the poor would be attended at their own homes, if necessary, and thus spared the weary journey to, and waiting at, the hospital. He disapproved altogether of the present practice, by which the poor came crowding to the hospital in such numbers that it was impossible for the slender medical staff to pay proper attention to them. It was to help forward the cause of the poor that he was present, and he felt sure that the scheme of establishing and extending provident dispensaries would meet with the approbation and support of the whole medical profession. Their general adoption would cause the sick poor to be sought out, proper food and cleanliness would be insisted upon, they would disseminate the simple laws of hygiene, and, as an inevitable consequence, not half the diseases that were committing such fearful ravages amongst the poor need occur at all. Sir William went on to condemn the system of out-door letters, and said that he himself had proposed that they should be thrown amongst the patients broadcast, to be scrambled for, and that the lucky possessors of these quasi-lottery prizes should *not* be attended to until their weaker and consequently more deserving fellow-patients had been taken in hand. Sir William concluded by stating that the present system of out-door and gratuitous relief was a disgrace to any civilised community, as being insufficient and demoralising, when it should be properly organised and close at hand, all which requirements the extension and establishment of provident dispensaries would meet.

THE CURRICULUM FOR THE DIPLOMA OF THE IRISH COLLEGE OF SURGEONS.

To the Editor of THE LANCET.

SIR,—In a few days the Medical Council will be again assembled, and I think that the direction of its attention to reform of real value is what practitioners and students alike call for.

I wish to point out that the curriculum required by the R.C.S.I. is more by one course in anatomy, physiology, and surgery than that required by London, and London insists upon more than Edinburgh. Now, the Dublin College does not give a more searching examination than the London one, and the latter, as far as I am aware, turns out respectably competent surgeons, after a very good general test. It would almost look like clinical and other instruction being better in London than Dublin, but the council of the Irish College will not admit this, nor, indeed, am I disposed to do so. Why, then, should the curriculum recognised at London be refused at Dublin? I have had an opportunity of observing the conduct, during their first year, of students seeking the L.R.C.S.I., and when I state that, generally speaking, they knew as much on first seeing the dissecting-room as at the commencement of their second year, I merely state a recognised fact at the Dublin schools. Such, then, is encouragement to negligence and carelessness, so much so that it is ever afterwards difficult to keep in a proper groove of study. Would it not be better to get the anatomical examination over at the end of two years, and devote the remainder to the clinical and more practical departments? In this way a "student" would likely be one in reality as well as name.

In conclusion, I invoke the Medical Council to supplant usage by reason and progress.

Your obedient servant,

March 29th, 1878. A DUBLIN STUDENT.

BIRMINGHAM.

(From our own Correspondent.)

"Hospital Saturday," by which so much benefit has accrued to the charities of this and other towns, was held on March 30th, and, in spite of the general stagnation of trade, the collections have up to the present time amounted to £2358, while at the same time last year they only reached £2331. So good a result, on this the sixth anniversary, is due to the systematic manner in which weekly collections have been made in the various manufactories and workshops, and also to the hearty co-operation of the licensed victuallers and retailers in the cause of hospital relief.

The annual meeting of the governors of the Queen's Hospital was held last week, under the presidency of the Mayor (W. Kenrick, Esq., J.P.), who spoke in favourable terms of the free system which had been by them adopted two years ago. The report showed that the income and expenditure of the hospital for the year nearly balanced, but that there was a debt on the institution of nearly seven thousand pounds. 1072 in-patients had been received during the year, and of these 935 came under the head of accidents and acute medical cases. The sanitary condition of the hospital had been improved, and there had been an entire absence of erysipelas and other hospital pests. The average residence of in-patients had fallen from 28·2 days in 1872 to 22·6 in 1877. The Mayor moved, and Mr. Wilders, chairman of the medical committee, seconded the adoption of the report, and this was followed by a vote of thanks to the medical staff for the zeal and ability with which they had performed their duties.

At the last meeting of the board of guardians, Dr. Barratt very properly called attention to the case of a pauper patient, who, while suffering from acute bronchitis, was removed to the workhouse on a bed of straw in the parish van, and whose death had, according to the verdict of a coroner's jury, been accelerated by such improper removal.

Dr. Mackey has resigned the honorary physicianship of the Queen's Hospital, after devoting several years to clinical teaching and original observation in the Birmingham hospitals, and his removal from the town will be a subject of regret to his numerous friends and fellow-workers.

Birmingham, April 2nd, 1878.

MANCHESTER.

(From our own Correspondent.)

MR. WINDSOR has resigned the lecturership on Opthalmology at Owens College, along with the post of ophthalmic surgeon to the Infirmary, and, unfortunately, there does not appear much chance of the two offices being again united in one person, unless Dr. Little, who is senior surgeon to the Eye Hospital, should offer himself as a candidate for both posts.

Mr. Lund removed the astragalus last Saturday in a case of extreme talipes varus in the adult; the alternative was amputation at the ankle-joint, as the deformity completely lamed the man, and this Mr. Lund was anxious to avoid, feeling considerable confidence that he will be able to give the man a good and useful foot.

Two interesting cases of intestinal obstruction have lately been operated on in the infirmary, both occurring in Mr. Bradley's wards. One was a case of large scrotal hernia on the left side, with symptoms of obstruction, which a consultation decided called for operative interference. On opening the sac a quantity of fæcal matter escaped, but no strangulation was found. A post-mortem examination revealed an unusual state of things. The sac was found to contain, in addition to a large quantity of small intestine, the whole of the appendix cæci dragged over from the right. This organ was the seat of inflammation, and had given way by two small perforations to the passage of liquid fæces.

A case is at present under observation of suspected renal calculus, in which Mr. Heath intends to perform nephrotomy.

Mr. Lund will probably consent to become a candidate for the forthcoming vacancy in the Council of the College of Surgeons, and his acknowledged eminence as a surgeon and wide popularity in the profession inspire his supporters with a reasonable hope of a successful issue to the contest. A memorial requesting him to become a candidate, numerously signed by influential Fellows, will shortly be presented to him.

PARLIAMENTARY PROCEEDINGS.

HOUSE OF COMMONS.

Tuesday, April 2nd.

BENGAL MEDICAL REGULATIONS.

In reply to Mr. O'Donnell, Colonel LOYD-LINDSAY said it was laid down in the Bengal Medical Regulations that the Secretary to the Surgeon-General must be selected from among the executive medical officers serving in India, and those regulations had been compiled with. The official referred to had been properly selected by the local Indian authorities in whose hands the appointment rested.

Wednesday, April 3rd.

THE VACCINATION LAW (PENALTIES) BILL.

The greater part of the afternoon was spent in discussing the Vaccination Law (Penalties) Bill, the second reading of which was moved by Mr. Pease without explanation. Mr. Wheelhouse, who had given notice to move its rejection, not being present, Mr. SCLATER-BOOTH said that though he desired the local authorities to exercise the greatest discretion in making orders for the enforcement of penalties, to do away with repeated prosecutions would weaken the efficacy of compulsory vaccination. At the same time, he should be glad if anything could be devised to meet the grievance of cumulative penalties.—Mr. PEASE then made his speech in support of the Bill, explaining that its object was to carry out the recommendations of the Select Committee, and that it would limit the number of prosecutions to two, and the amount of penalty to 20s.—Earl PERCY spoke in favour of a comprehensive inquiry into the present system of vaccination; and Mr. W. E. FORSTER supported the second reading on the understanding that the Bill should be referred to a Select Committee limited to the question of penalties. Sir T. Chambers supported the Bill, and Sir W. Barttelot and Dr. Lush, though strongly in favour of compulsory vaccination, desired an improvement in the administration of the law. Mr. Forsyth and Sir J. M'Kenna, on the other hand, opposed the measure.—Mr. GLADSTONE spoke in favour of reading the Bill a second time and sending it to a Select Committee, pointing out that cumulative penalties are unknown in Scotland and Ireland, and that the law necessarily operates unequally on rich and poor.—Lord R. CHURCHILL moved the rejection of the Bill, emphatically denouncing it as destructive of the entire system of vaccination, and Dr. PLAYFAIR, who followed on the same side, spoke of it as a sale of indulgence to break the law. Mr. Pell, Mr. Samuda, Mr. North, Mr. Dillwyn, and Colonel Mure also opposed the Bill, and Mr. Muntz supported it.—Mr. SCLATER-BOOTH, in explanation, said that as it would be impossible by the rules of the House to limit the inquiry before the Select Committee to the question of penalties, he could not support the second reading, and Mr. Forster advised Mr. Pease to withdraw the Bill if the Government would grant a separate inquiry. Mr. Pease offered to do this, but no answer was given to his appeal, and on a division the Bill was thrown out by 271 to 82.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the Primary Examination in Anatomy and Physiology at meetings of the Board of Examiners on Monday, Tuesday, and Wednesday last:—

George Aumand, Melbourne Hospital; David Lowson, Aberdeen; W. Aloysius Day and T. A. P. Marsh, Bristol; Robt. Jones, George F. Barnes, G. Trevern Hockin, S. Westcott, C. H. B. Shears, J. Armitage, D. D. Day, E. J. E. Risk, C. P. Lukis, A. Haig, J. H. Sewart, and R. S. Batson, St. Bartholomew's Hospital; W. W. Pryn, B. E. Studer, W. Eckett Fielden, W. W. David, F. H. Shaw, and G. Ryding Marsh, Guy's Hospital; N. Bentham, W. A. Duncan, F. William Marlow, H. P. Gilbert, and G. M. Wasse, St. Thomas's Hospital; T. Kay Whitehead, William Stanwell, R. Hanson Wolstenholme, W. M. Roocroft, J. M. Chadwick, and Charles I. Mouncey, Manchester; H. J. Minchinton, A. Wheeler, E. E. King, John Palmer, W. Atterbury, and T. W. Scale, Middlesex Hospital; Arthur Northcott, E. Cotterell, R. H. Firth, George Welch, A. B. Voisin, and C. A. A. Collings, University College; Ewing M'G. Aitken, Glasgow; J. Hutchinson, R. Volckman, and L. Francis, London Hospital; J. Thirkell and J. H. Oates, Leeds; A. H. Proffitt, R. T. Vivian, H. F. Parsons, and J. Tucker, St. Mary's Hospital; R. Rice, H. F. Corbould, and J. Turton, Charing-cross Hospital; Frederick J. Lahmbeer, Liverpool; J. W. Batterham, Westminster Hospital; E. H. Wagstaff, King's College; F. J. Driver, Cambridge; A. Hooley, Charing-cross Hospital.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on March 28th:—

Bell, William Montague, Camden-road.
Fraser, Graeme Bisdee, St. Mary's Hospital.
Good, Frederick Thomas, Highbury-hill.
Gover, Henry John, Clapham.
Hawks, Robert Shafto, Hertford.
Skelding, Henry John, Bayswater.
Walter, William Henry, Sydenham.

DR. MURPHY, late medical officer of Ramelton Dispensary District, has been presented with an illuminated address on his leaving that place to practise in England.

AN inquiry was held this week in Galway, in consequence of a body having been sent from the workhouse to the dissecting-room of the adjoining Queen's College which was claimed by the friends for interment. The mistake of removing the wrong body appears to have arisen by the man employed to carry it to the College not being in a sober condition. A resolution was adopted that the most stringent measures should for the future be taken to prevent any recurrence of the irregularity.

HOSPITAL FOR SICK CHILDREN, NEWCASTLE-ON-TYNE.—At the annual Court of Governors of this institution, held on the 27th ult., it was stated that though its successful working afforded good grounds for satisfaction, yet owing to the increased cost of treatment of patients, some modification of the existing rules appeared advisable. The change suggested by the Committee was in the direction of the establishment of a more equitable proportion between the money value of subscriptions, and the number of recommendatory letters to which subscribers have hitherto been entitled.

VACCINATION GRANTS. — The following gentlemen have received the Government grant for successful vaccination in their respective districts:—Dr. H. Cuolahan, Bermondsey, £115 2s. (third time); Mr. W. Powell, Bromyard, £11 5s.

CARMICHAEL PRIZES.—The Council of the Royal College of Surgeons in Ireland have given notice that on the first Monday in May, 1879, they will proceed to adjudge a prize of £200 for the best essay, and a prize of £100 for the second-best essay, that may be sent in to them in accordance with the instructions prescribed by the late Mr. Richard Carmichael.

SMALL-POX IN DUBLIN.—The Guardians of the South Dublin Union have rescinded a recent resolution to erect sheds for small-pox patients within the walls of the workhouse. The proposal would seem to be a most injudicious one, and highly dangerous to the large number of inmates in the institution. It has been determined to utilise the Dublin hospital ship as a convalescent hospital for patients recovering from the disease.

BEQUESTS ETC. TO MEDICAL CHARITIES. — Mrs. Martha Egleton, of Oxford-terrace, Hyde-park, bequeathed £500 each to the Royal Hospital for Incurables and the National Hospital for the Paralysed and the Epileptic, £300 each to the Brompton Hospital for Consumption and the Metropolitan Convalescent Institution, £200 each to St. Mary's Hospital and the Earlswood Asylum for Idiots. Mr. Henry Brown, of Bradford, Yorkshire, bequeathed £500 to the Bradford Infirmary, £500 to the Royal Albert Asylum for Idiots and Imbeciles in Lancaster, £250 to the Bradford Eye and Ear Infirmary, £250 to the Bradford Fever Hospital, and £100 to the Ilkley Hospital. The Hospital for Sick Children, Great Ormond-street, has received two sums of £500 each to the building fund, anonymously. Miss Elizabeth Halsted, of Chichester, bequeathed £500 each to the Royal Hospital for Incurables, the National Hospital for the Relief and Cure of the Paralysed and Epileptic, and the Cancer Hospital, and £400 to the Brighton Eye Infirmary. The Paisley Infirmary has become entitled to £250, out of the "residue" of the estate of a Paisley gentleman who died upwards of forty years ago. The Greenock Infirmary has become entitled to £200 under the will of Mr. Archibald Adam.

Medical Appointments.

BAYLIFFE, A. M., M.R.C.S.E., L.S.A.L., has been appointed a Medical Officer of Health for the Axbridge Rural Sanitary District, at £100 per annum.

BENNETT, E. H., M.D., F.R.C.S.I., has been appointed a Consulting Surgeon to St. Mark's Ophthalmic Hospital, Dublin.

BOWER, R., L.R.C.P.I., M.R.C.S.E., has been appointed a Surgeon to the Ebenezer Chapel Sick Society, Birmingham, vice Clarkson, deceased.

BRENNAN, J. H., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer, Public Vaccinator, &c., for the Kiltormer Dispensary District of the Balinasloe Union, at £112 per annum and fees, and £15 per annum as Medical Officer of Health, vice O'Farrell, appointed to the Eyrecourt Dispensary District, Portumna Union.

CANTLIE, J., M.D., has been appointed an Assistant-Surgeon to the Charing-cross Hospital, vice Godlee, resigned.

CRAIG, G. A., M.B., C.M., has been appointed an additional Surgeon to the Ebenezer Chapel Sick Society, Birmingham.

EDGAR, J., M.B., C.M., has been appointed Public Vaccinator for the Settle and Horton Districts of the Settle Union, vice Green; and for the Kirkby Malham and Long Preston Districts, vice Hartley.

ELLISON, Mr., M.R.C.S., L.S.A., has been appointed Junior House-Surgeon to the Birkenhead Borough Hospital, vice Baker, appointed House-Surgeon.

FITZPATRICK, A. E., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed an Honorary Medical Officer to the Seaforth Dispensary and Hospital.

GREENING, F. J., M.R.C.S.E., has been reappointed Medical Officer to the Ryde Dispensary for the ensuing year.

HARVEY, C. A., M.D., C.M., L.A.H.D., has been appointed a Medical Officer, Public Vaccinator, &c., for the Cork Dispensary District of the Cork Union, vice O'Sullivan, resigned.

JEFFERSON, J. G., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer, Public Vaccinator, &c., for the Aghalee Dispensary District of the Lurgan Union, at £100 per annum and fees, and £16 per annum as Medical Officer of Health, vice Parke, deceased.

MARSH, W. A., M.R.C.S.E., has been appointed Honorary Surgeon to the Newington District of the Royal South London Dispensary, vice Jones, resigned.

MULLINS, R. C., L.R.C.S.I., L.R.C.P.Ed., & L.M., has been appointed Medical Officer to the Worksop Dispensary and Hospital, at £120 per annum, furnished apartments, &c., vice Moore, resigned.

NEALE, J. E., M.R.C.S.E., has been appointed Surgical Registrar to the Westminster Hospital, vice Robertson, resigned.

O'NEILL, L. J., L.R.C.S.I., L.K.Q.C.P.I., & L.M., has been appointed Medical Officer, Public Vaccinator, &c., for the Carney No. 2 Dispensary District of the Sligo Union, at £100 per annum and fees, and £20 per annum as Medical Officer of Health, vice Roe, appointed to No. 1.

PIDCOCK, G. D., B.A., has been appointed Assistant House-Surgeon to the Cumberland Infirmary, Carlisle, vice Hinings, resigned.

PIKE, J. B., M.R.C.S.E., L.R.C.P.Ed., has been elected Resident House-Surgeon to the Loughborough Dispensary, vice Whittle, resigned.

REES, D. V., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the St. Clears and Mydrim Districts of the Carmarthen Union, and Medical Officer of Health for the St. Clears and Mydrim Sub-districts of the Carmarthen Rural Sanitary District, vice Thomas, deceased.

SMITH, G., M.R.C.S.E., L.S.A.L., has been appointed a Medical Officer of Health for the Axbridge Rural Sanitary District, at £100 per annum.

TAAFFE, M. H., L.R.C.S.I., L.A.H.D., has been appointed Medical Officer, Public Vaccinator, &c., for the Ardrahan Dispensary District of the Gort Union, co. Galway, vice Ireland, resigned.

WICKS, W. C., M.B., C.M., L.R.C.P.Ed., has been appointed a Physician to the Hospital for Sick Children, Newcastle-on-Tyne.

WILKS, A. G. P., M.B., has been reappointed Physician to the Ryde Dispensary for the ensuing year.

WILSON, T., M.R.C.S.E., has been elected Medical Officer of Health for the Wallsend-on-Tyne Urban Sanitary District.

Births, Marriages, and Deaths.

BIRTHS.

BARKER.—On the 28th ult., at Pitsmoor, Sheffield, the wife of Elijah Barker, M.R.C.S.E., of a son.

BEATSON.—On the 24th February, at Sitabuldi, the wife of Surgeon-Major W. B. Beatson, M.D., F.R.S.C., Civil Surgeon, of a daughter.

GUTHRIE.—On the 29th ult., at Esher, Surrey, the wife of James Guthrie, M.D., of a son.

MADIGAN.—On the 26th ult., at Drumcollogher, co. Limerick, the wife of John F. Madigan, L.R.C.P.Ed., of a son.

PHILPOT.—On the 27th ult., at South Eaton-place, the wife of J. H. Philpot, M.D., of a son (still-born).

SMITH.—On the 31st ult., at Coxwold, Easingwold, the wife of James W. Smith, M.R.C.S.E., of a son.

MARRIAGES.

FLEMING—WALLS.—On the 2nd inst., at Belhaven-terrace, Glasgow, by the Rev. T. Dobbie, William James Fleming, M.B., F.F.P.S., Lecturer on Physiology, Glasgow Royal Infirmary School of Medicine, to Annie Cole, eldest daughter of William Walls, Esq.

THOMPSON—PHIBBS.—On the 12th March, at Rosse's Point Church, James Edward Thompson, M.B., to Bessie Florence Sophia, daughter of the late H. T. Phibbs, Esq.

DEATHS.

ALLAN.—On the 15th ult., Robert Allan, retired Army Surgeon, aged 71.

APPLETON.—On the 15th ult., at York, John Grigg Appleton, late of Luton, Beds, aged 75.

EVANS.—On the 23rd ult., at Cheetham, Manchester, Thomas Evans, M.R.C.S.E., aged 25.

JOB.—On the 28th ult., at Upper Merthyr Tydfil, John Job, L.R.C.P.L., Senior Assistant-Surgeon, Dowlais Ironworks, Glamorganshire, aged 27.

JONES.—On the 28th ult., at Brentford, John William Jones, Surgeon, aged 74.

KELSON.—On the 1st inst., at Great Marlow, Bucks, George Kelson, F.R.C.S.E., aged 82.

MACK.—On the 31st ult., at Colmonell, Ayrshire, John Steele Mack, L.R.C.S.Ed., aged 35.

RHIND.—On the 30th ult., at Torquay, Samuel Rhind, L.R.C.P.Ed., aged 48.

THOMAS.—On the 15th February, John Little Thomas, M.R.C.S.E., of St. Clears, Carmarthenshire, aged 44.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

BOOKS ETC. RECEIVED.

Dr. Parkin: The Antidotal Treatment of Disease. Part I.
Dr. Jones on Aural Surgery.
Railway Servants. An Appeal to Parliament and the Public.
Second Report of the Metropolitan and National Nursing Association for Providing Trained Nurses for the Sick Poor.
The Journal of Mental Science. April.
The Veterinary Journal. April.
The Veterinarian. April.
Dr. L. Hermann: The Vivisection Question.
Dr. H. J. Yeld: Report on the Health and Sanitary Condition of Sunderland. 1877.
Dr. Turnbull on Injuries of the Eye.
J. H. Stirling: Burns in Drama.
Narcotic Indulgence.
The Quarterly Journal of Microscopical Science. April.
Thirteenth Annual Report of the Sanitary Commissioner with the Government of India. 1876.
E. Atkinson: Natural Philosophy.
Medicinal Plants. Parts XXVI. to XXXI.

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, APRIL 4TH, 1878.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb	Dry Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Mar. 29	29·20	E.	34	34	..	38	32	0·32	Overcast
,, 30	29·28	N.	32	35	..	43	32	0·18	Fine
,, 31	29·53	N.W.	38	41	..	46	30	..	Overcast
April 1	29·14	N.W.		35	..	48	29	0·19	Cloudy
,, 2	29·30	N.W.	37	41	..	42	31	0·06	Fine
,, 3	29·56	W.	41	43	..	45	37	..	Overcast
,, 4	29·78	N.W.	38	40	..	56	34	0·31	Overcast

Notes, Short Comments, and Answers to Correspondents.

LATENT GASTRIC SPHACELUS.

A CURIOUS case, interesting both from a medico-legal and a purely medical point of view, has been recorded by M. Dujardin-Beaumetz. A man, forty-seven years of age, stated that he had been attacked five days before with hæmatemesis and gastric pain. There was no tumour, nor marked gastric disturbance, a milk diet being borne without discomfort or sickness. A few aphthous-looking ulcers in the mouth puzzled the physician; but the case appeared to be one of simple gastric ulcer. In this state, without vomiting, and with but little gastric pain or sickness, the man lived or a fortnight, and then died suddenly. An autopsy revealed that the whole of the stomach, except the pyloric region, had sloughed, the necrosis involving not only the entire thickness of the wall, but also the diaphragm and omentum, so that when the slough was removed, the lung, liver, the whole spleen, and the intestine were exposed. Such a lesion could only have resulted from the action of a caustic liquid, and this explained the ulcers observed in the mouth. On inquiry it was elicited that the man had been for some time much depressed, owing to want of employment. Just before the first hæmoptysis he had retired, apparently well, and on returning had fallen on the floor, calling out that he was dead, and begging for water. Then followed the hæmatemesis. Thus there could be no doubt that he had attempted suicide by swallowing some corrosive liquid, and that he had successfully concealed the attempt, maintaining for a fortnight the appearance of health, and the apparent integrity of his digestive functions, although the greater part of the stomach was necrosed. It was apparently the separation of the slough which had determined his death.

T. B.—Nothing short of destruction of the skin will remove the marks if the pigment be incorporated in the meshes of the cutis.

SHOE FOR TALIPES.

To the Editor of THE LANCET.

SIR,—In your journal of last week Dr. C. Edwards, of Cheltenham, has directed my attention to "a shoe for talipes" which he described and figured in the *Medical Times and Gazette* of April 30th, 1859, and which he considers "if not exactly of the same structural detail, at least precisely fulfilling the same indications as that exhibited by him (i. e., myself) to the Medical Society of London."

I have referred to the journal, and also been to Messrs. Weiss, who did not happen to have one of the instruments referred to. However, the woodcuts sufficiently illustrated its mechanism. The sole-plate is divided transversely into two portions, as in my instrument; but the anterior portion moves independently of the posterior portion, only laterally on a horizontal plane by "an arc slide and screw"; whereas in the modification of the Scarpa's shoe I exhibited to the Medical Society of London, and described in your journal of March 23rd, the anterior portion of the sole-plate moves independently of the posterior portion in six different directions, by three rack-and pinion movements underneath the sole-plate. These movements correspond precisely to the movements of the anterior portion of the foot in talipes equino-varus from the transverse tarsal joint in front of the astragalus—a joint which partakes somewhat of a ball-and-socket character, and the importance of which has never been sufficiently recognised in the treatment of these deformities.

Another important difference relates to the position of the steel uprights passing from the sole-plate to the calf of the leg. This in Dr. Edwards' instrument is placed, as usual, on the outer side; but in my instrument it is placed on the inner side, where I have for many years placed it in all cases of talipes equino-varus, or relapsed varus, in patients above five years of age. By acting upon the sole-plate from the inner side in these cases, an important leverage is gained, the object being not so much to depress the great toe as to uplift the fourth and fifth metatarsal bones.

I am indebted to Dr. Edwards for directing my attention to an instrument with which I ought to have been acquainted, but which I had overlooked, and have no hesitation in stating that it was at the time it was published a step in advance, and in the right direction.

Your obedient servant,

WM. ADAMS.

Henrietta-street, Cavendish-square, April 2nd, 187 .

SPLENOTOMY.

AN account of what appears to have been the first case of excision of the human spleen in America was lately read before a Medical Society in Sacramento, and subsequently recorded in the *Pacific Medical and Surgical Journal*. The operator was Dr. G. B. Simmons, who had his patient, a male, under observation for nearly three years, during which time no effect was produced on the progressive growth of the tumour by the various remedial measures applied. In June, 1877, it was determined to operate, and an incision was accordingly made in the abdominal wall, near the linea alba, from four inches above to four inches below the umbilicus. There was some fluid in the abdominal cavity, and some recent adhesions to the intestine, which were carefully separated, and the bleeding points secured by carbolised ligatures. The organ was then turned out, when strong adhesions to the diaphragm were found, which occasioned some difficulty. The pedicle and gastro-splenic omentum, including the larger vessels, were ligatured in sections, the ligatures cut close, and returned. The final removal of the organ was effected without allowing any blood from the incised splenic vessels to enter the cavity. The ascitic fluid was sponged out, and a drainage-tube having been inserted into the lower end of the wound, the incision was closed by sutures, and dressings applied. The patient rallied well from the effects of the anæsthetic (ether), but soon began to vomit, and to discharge a sanguineous fluid through the drainage-tube, after which he rapidly sank, and died from hæmorrhage two hours and a half after the completion of the operation. No post-mortem was made.

HOUSE DRAINAGE.

To the Editor of THE LANCET.

SIR,—The following particulars, showing how a bedroom was directly connected with a cesspit, may appear to you sufficiently interesting to occupy a place in your columns.

Three or four days since I received advice that a child was suffering from diphtheria in a house not hitherto suspected of being unhealthy, and subsequently, on the death of the child, I visited the premises, and made a thorough examination of them. The house is scarcely three hundred yards from the river, stands well, is built on the sandstone rock, and lets at £45 a year. The soil-pipe is taken outside the house at once, and terminates above in the trap of w.c., which is in good order; so that thus far, except the soil-pipe wanted a ventilator, all was in accordance with modern approved principles. However, on opening the ground at the foot of the soil-pipe, it was found to deliver into a drain of brick and stone, which in turn delivers into a cesspit in the area. The basement drain was also found to be of brick and stone, and delivers into the same cesspit. Unsatisfactory as a system of "rubble" drains running under a house always is, these particular drains appeared to be water-tight, and the connexions with them were well made, and I was at first at a loss to explain how the drain air entered the house, unless by forcing its way through one or other of the traps; but on following up the rain-spout, I discovered that it was carried directly into the basement drain close to where it escaped from the house, and that the upper extremity of this rain-spout passed through two bedrooms to collect from the gutter in the front of the roof. In its course to the back of the house the spout was defective in several places, thus admitting the gaseous contents of the soil-charged cesspit into a spare room and the bedroom in use by the deceased child.

As there is a gully-trap just in front of the house, it seems surprising that the rain from the roof was not delivered on this. Carrying off the rain in the way I have described is, I trust, not common. I do not remember ever to have met with an arrangement so reprehensible, although the older houses in this town are probably as defective as most old houses.

I am, Sir, yours &c.,

Birkenhead, March 20th, 1878. FRANCIS VACHER.

Quæro.—1. We cannot recommend any trustworthy book.—2. (a) Our Baths and Wells, by Macpherson; (b) Baths and Wells of Europe, by Macpherson; Curative Effects of Baths and Waters, by Braun, translated by H. Weber.—3. Electricity in Medicine and Surgery, by Poore.

TURPENTINE IN DIPHTHERIA.

To the Editor of THE LANCET.

SIR,—In reply to a question by Mr. Pringle, relative to the use of turpentine in diphtheria, in your issue of March 23rd, it is correctly asserted that not much is to be found in books upon the subject; consequently a few statements scattered through the medical journals may not be unacceptable to your readers. Dr. Perry (*Medical Times and Gazette*, vol. i., 1859, p. 245) states, in a paper on the Treatment of Diphtheria: "I have tried almost everything that I know to have been recommended, and have failed, and perhaps we often shall fail under any treatment; but I think it proper to mention what has succeeded with me of late. It is for a child of from two to six years of age. Ten minims of spirits of turpentine every two hours, and five grains of carbonate of ammonia every two hours." Professor Cooper, of San Francisco, almost gave up the treatment of diphtheria in despair, when he hit upon the following plan, which was attended with most encouraging success:—Chloroform, three ounces; cod-liver oil, twelve ounces; oil of turpentine, two ounces: apply all over neck, chest, and abdomen upon flannels covered with oiled silk (*vide Medical Times and Gazette*, vol. i., 1860, p. 299).

Before closing this letter I would strongly recommend an extended trial of lactic acid, locally, as spray or with the brush, both on account of the rapid manner in which it removes the false membrane, and also because its application is not unpleasant, and is well borne by children. References to papers descriptive of its value may be found in Section 920-2 of the "Medical Digest," published by the New Sydenham Society.

Yours &c.,

RICHD. NEALE, M.D. Lond.

Boundary-road, St. John's-wood, March 28th, 1878.

DUBLIN DAIRY-YARDS.

THE disgraceful condition of the dairy-sheds in Dublin has long been a subject of complaint, and we are gratified to learn that an Order in Council has been published in the *Dublin Gazette*, which will, if the regulations are properly carried out, have the effect of altering the present state of things for the better. For the future every owner of a cattle-shed will be obliged to register its situation and the number of animals kept, and each shed must be flagged or paved, well lighted and ventilated, and possess sufficient breathing space for each animal. Also, each shed must be swept twice daily, and the walls whitewashed twice a year. A penalty not exceeding £20, or £5 per head, will be inflicted for neglect of this Order, and it is to be hoped that these regulations will serve to improve the quality of the milk, and in a sanitary point of view be of great service to the city generally.

Judex should write to the Medical Department.

THE FORCEPS IN CERTAIN BREECH PRESENTATIONS.

To the Editor of THE LANCET.

SIR,—I was honoured by having a paper on the Use of the Forceps in certain Breech Presentations read before the Obstetrical Society of London at its October meeting last year (THE LANCET, Oct. 20th, 1877); but as I could not, of course, be present, I shall feel much obliged if allowed to offer a few very brief remarks in reply to objections which were taken to the procedure adopted in the two cases of which details were given.

We know in the vast majority of these cases no interference is necessary; in others of a more troublesome character digital manipulation is safely and effectually applied; but I submitted that in certain rare instances the introduction of the hand in order to bring down a foot, and so "decompose the wedge" (Barnes), must be attended with the greatest risk of injury to the maternal tissues, and that here the use of the forceps was indicated. Dr. Barnes, whose remarks on this subject in his "Obstetric Operations" I had most carefully studied before writing, has always succeeded in obtaining delivery by the use of the hand alone. This success, however, is exceptional; and the subject being confessedly a difficult one, and "too little considered in our text-books," I hoped, and may perhaps still hope, that the history of the two most difficult cases I have met during six-and-thirty years of practice, and in which the treatment far surpassed my expectations, might not be without interest. Briefly to refer to the more salient points of one of these, I may say the patient was a very nervous but tolerably healthy woman, a primipara, and forty years of age. After a very lingering and exhausting labour, the breech advanced as far as the vulva, but there remained fixed. Uterine action, although ergot was freely given, virtually ceased. Nature, finding she had a task to attempt to which she was unequal, appeared to give up the struggle, and the patient lay in that utterly prostrate, inert, and somnolent condition which is the despair of the busy practitioner. The child was large and full-grown, and the impaction excessive. At the same time so much progress had been made before arrest took place that the tissues of the comparatively old primipara were so strained over the presenting mass, that after a trial it was clear the introduction of a hand could only be effected by violence, and therefore at extreme risk to the mother, especially considering the now irritable condition of the parts. The safety of the mother being the first consideration, I therefore determined to use the forceps, as I had done in a similar case before, and the result was so entirely satisfactory that I should never hesitate to do so again under like circumstances. This formidable case, I think, afforded a crucial test as to the efficacy and value of the forceps; but it must be admitted Dr. Barnes informed the meeting he had seen its "inefficiency and danger." If Dr. Barnes had himself failed with the forceps I should at once give way to such an authority; but as he has always succeeded by digital manipulation, I take it for granted he has only seen others fail, and that he was therefore slightly misunderstood when speaking. If this was the case, it may be asked what was the cause of the "inefficiency and danger"? In my own case I used the so-called Barnes's long forceps, and secured an excellent grip without inflicting any injury. Delivery, however, was not accomplished by direct traction only, but by making use also of a continuous swaying action of the forceps-handles upwards and downwards. I hoped that the slight but repeated leverage action thus exerted on each side alternately of the breech would gradually break up and relieve the impaction, and this certainly appeared to be the effect of the procedure, and I think contributed largely to the happy result. As to the forceps being dangerous to the child, I do not see how pelvic can be more dangerous than head delivery, as the soft parts above the pelvis would probably be protected, and pressure warded off, by the pelvis itself filling the cavity of the instrument. If, again, asphyxia occurred, I think it is as likely to be produced by the pressure of the vaginal tissues on the cord as by the forceps. I know, notwithstanding all my efforts, this happened in my own case. Still, if this were dreaded, it would be easy to relax the pressure of the blades temporarily every minute or two. In the absence of pulmonary respiration, the pressure on the chest could do no injury. The pressure here, indeed, must be very slight, as it is rather exerted lower down at the region of impaction. But even here, if we take *Arté non vi* for our motto, and trust a good deal to gentle alternate leverage, I believe no injury need ever be inflicted.

I remain, Sir, yours truly,

J. W. AGNEW, M.D., M.R.C.S. Eng.

Hobart Town, Tasmania, Jan. 21st, 1878.

PULSATILLA.

IT is intended to add a new drug to the Pharmacopœia of the United States, of whose usefulness very sanguine hopes are held. The substance is pulsatilla, of the natural order of Ranunculaceæ. Dr. H. G. Piffard has given it a trial in dysmenorrhœa &c., and in a paper, now published, evidently thinks highly of its therapeutic value. Pulsatilla is exhibited in the form of tincture of the fresh plant.

AMPUTATION OF THE RECTUM.

THE *St. Louis Medical and Surgical Journal* publishes some brief notes of a case of amputation of the rectum. The organ had been prolapsed for about two years, and extensively ulcerated. Two operations were required to remove the sphacelous mass, and the case was somewhat troublesome. About nine inches of gut were cut off, including probably the entire rectum. The patient did well. The operator, Dr. Ford, considers amputation of the rectum a rather simple affair, to be practised with impunity.

Fairplay should read the amendment set down for the "Dental Practitioners Bill."

ATROPIA.

To the Editor of THE LANCET.

SIR,—Dr. Farquhar Lloyd's case of far advanced phthisis, in which such distressing symptoms followed the administration of 1-50th of a grain of sulphate of atropia for the relief of night-sweats (THE LANCET, March 9th, 1878, page 370), possesses considerable interest. It may be accepted as a contribution to the settlement of what is still a doubtful point—namely, whether pregnancy modifies the action of belladonna. At the same time there seems room for doubt as to the relation between the atropia and certain of the symptoms. Although vomiting will sometimes occur after even a smaller dose than that mentioned, we do not usually find "violent pain and burning in the stomach," and indeed this is scarcely what one would expect from a drug which has been praised in the treatment of painful gastric affections. This doubt is favoured by the fact that vomiting gave the patient immediate relief, and that she was in her usual condition next morning. In my experience, where dryness of the mouth and pharynx and dilatation of the pupil have resulted, although the former generally disappears by morning, the disturbance of vision only subsides gradually during the day, and is attended by indisposition for mental and and physical exertion for several hours.

With regard to the dose, a somewhat extensive observation has taught me that patients far advanced in phthisis, especially where the debility is very great, will not often tolerate more than 1-80th of a grain. In one case, indeed, even this dose produced such severe symptoms of poisoning that I had to abandon it after three or four attempts. In stronger patients the drug may be pushed up to 1-50th of a grain; but if this is exceeded, marked toxic symptoms will almost certainly ensue. In all cases, therefore, it is best to begin with 1-80th of a grain, so as to spare the patient needless distress. Distinct instructions should be given as to the frequency with which it is to be administered, so that the effect of each dose requires to be watched. My own impression is that women are more sensitive to atropia than men, but this is denied.

The mode of administration is a matter of choice; but the dispensing of so small a dose requires great care. Some prefer giving it in a draught. Dr. Aquilla Smith recommends for hypodermic use a solution of the sulphate in camphor-water. I usually prescribe it in pill, the atropia being made into a manageable powder by thoroughly triturating it with a large proportion of sugar of milk. In my hands the drug has certainly proved of great use in relieving the night-sweats of phthisis.

Your obedient servant,

JAMES M. WILLIAMSON, M.D.

Ventnor, Isle of Wight, March 11th, 1878.

An Enquirer.—The annual meetings of the General Medical Council are open to the members of the medical profession and to those engaged in professional studies.

Mr. C. Marchant Jones.—The answer to our correspondent was quite impersonal.

THE BARBER FUND.

To the Editor of THE LANCET.

SIR,—I beg to acknowledge the following additional contributions to this Fund; and in thanking those of my professional brethren who have so kindly responded to my appeal, permit me to again remind the profession generally that the case is an urgent one, and that farther subscriptions are yet needed:—

Verax	£1	1	0
Dr. Carstairs, Peel, Isle of Man ..	0	10	0
Dr. Bull, Hereford	2	2	0

I am, Sir, your obedient servant,

Latham House, Crickhowell, April 2nd, 1878. PHILIP H. HILL.

P.S.—Perhaps I ought to add that the subscriptions up to this date amount to £25 3s.

Dr. John McIntyre.—We cannot give our correspondent the particulars he requires. He should apply to the parties referred to in the advertisement.

MEDICAL LAW IN GUERNSEY.

To the Editor of THE LANCET.

SIR,—Allow me to inform you that not less than one hundred years back, in 1777, an "ordonnance" was passed, on the representation of the then Bailiff of Guernsey, prohibiting any stranger, on any pretext whatever, practising medicine or surgery without having obtained the sanction of the Royal Court of the island, under a penalty of 100 livres tournois (about £3). It is in consequence incumbent upon every medical man, not a native, who purposes practising in the island, to place his qualifications in the hands of the Procureur de la Reine, our chief Crown officer. These are read out before the assembled Court, consisting of the Bailiff and some of the Jurates, and, on proof of their validity, permission to practise is immediately granted. This enactment has hitherto effectually barred the door to all charlatanry from the outside world, though it has not checked the bone-setting and druggists' "counter-practice." It is, however, consolatory to know that these and other quackeries are a world-wide evil, which, as long as the public submits to be duped, will not be allowed to languish.

I remain, Sir, your obedient servant,

Guernsey, March, 1878. FRANCIS E. CAREY.

TREATMENT OF TALIPES.

THE last meeting of the Surgical Society of Ireland for the present session was held on the 29th ult. at the College of Surgeons. A paper on Talipes was brought forward by Mr. Swan, who described the various methods of treatment that were of benefit in these cases of deformity. In the discussion which ensued, a considerable diversity of opinion appeared to prevail, some surgeons believing that section of the tendo Achillis with the plantar fascia was almost invariably all that was required; whilst others thought that in many cases section of other tendons was absolutely necessary. As regards wounding the posterior tibial artery in cutting the adjacent tendon, it appears that but slight importance is to be attached to the accident, a pad over the injured vessel arresting the hæmorrhage. The author of the paper stated that this had happened to him on three occasions without any after inconvenience.

VACCINATION FROM THE CALF DIRECT.

To the Editor of THE LANCET.

SIR,—You were so good as to publish a letter from us about a month ago, announcing that we were prepared to supply the profession regularly with fresh calf vaccine lymph. This promise up to this date we have not been able *entirely* to fulfil for the following reasons:—

1st. Owing to our operations having been suddenly removed from Hampshire to London, we have found great difficulty in procuring suitable calves for vaccination.

2nd. The calves we did secure, owing either to the weather or some unknown cause, have not produced more than one-third the quantity of lymph we had been led from experience to expect.

3rd. Nine-tenths of our correspondents have demanded lymph in tubes; but as only a very limited number of tubes can be taken from any calf, even under the most favourable circumstances, we have not been able to provide one tube for five demanded.

Our arrangements being now completed, we shall be able to supply all ordinary demands for calf lymph.

No one who has not attempted to carry out the production and distribution of calf lymph can have any conception of the difficulties and anxieties incurred. With regard to calf lymph in tubes, we would remind the profession that, according to Dr. Warlomont and Dr. Martin, it is not nearly so reliable as that on points. The reason for this we believe to be that in a few days the more solid part settles down inside the capillary tubes, and only the more liquid part can be blown out.

No doubt it is easier to perform the operation of vaccinating with liquid lymph than with points; but if the vaccinator will very carefully *scratch* the skin, so as to avoid drawing that blood which washes out the lymph, and then, after carefully and slightly moistening the tip of the point, carefully rub the point *across* and into the scratched surface, he will rarely fail.

Dr. Martin writes to us that with points he does not fail once in 150 operations, and Dr. Warlomont's success with points is 96 per cent., and our success with points is about equally good.

In reply to the numerous inquiries as to the price of calf lymph, we beg to refer our correspondents to the advertisement in your pages of the 30th inst. We remain, Sir, yours &c.,

GEORGE WYLD, M.D. Edin.
264, Oxford-street, March, 1878. THOMAS WILSON, L.R.C.P. Edin.

Mr. W. J. Land.—The peculiarity described, the presence of a larger quantity of albumen in the evening than in the morning urine, is occasionally observed in organic renal disease, from which, no doubt, our correspondent's patient suffers. The excretion of albumen is largely influenced by diet, and it is probably to the increased quantity of albumen in the blood after dinner that the evening albuminuria is due.

Enquirer.—It is a too common practice to "make up" second editions of works from remains of the first.

AN ENORMOUS CYST IN CONNEXION WITH THE LIVER; FREQUENT ASPIRATIONS; RECOVERY.

To the Editor of THE LANCET.

SIR,—The following case, I think, will be of interest to your numerous readers.

Miss B——, aged fifty-three, thin, and of fair complexion. Catamenia continued regular until December last. I was first called to see her on Jan. 10th. There was not then any abdominal swelling or tenderness; the liver was not acting well, and the urine was high-coloured. I put her under mild alterative treatment, and for some days she seemed to improve. About Jan. 20th she began to complain of pain and tenderness over the region of the liver, and bile ceased to pass by the bowels. From that date her temperature, which before was normal, began to rise; pulse weak and rapid; aphthæ appeared in the mouth, and a decided swelling rapidly developed over the region of the stomach. On Jan. 26th, her condition being so serious, I aspirated the swelling, and drew off about eight ounces of fluid, which on examination proved to be bile and serum. There were no hydatids. The removal of the fluid gave her decided relief, but not for long; the fluid rapidly increased, and with it her condition grew worse—in fact, she was fast sinking. On Feb. 2nd I again aspirated, and drew off 140 ounces of the same fluid as before, her condition improving as the fluid was withdrawn. On Feb. 8th I again aspirated, and drew off 160 ounces, and on the 16th the same quantity. I now decided the next time to introduce a drainage-tube. Accordingly on Feb. 24th I introduced a male gum-elastic catheter. I applied an elastic bandage, as tight as could be borne, round the abdomen, leaving out the end of the catheter, which I surrounded with sponges and marine tow. From that date she began rapidly to improve; all discharge from the cyst had ceased in less than a week. She is now convalescent; her tongue is clean; appetite good; the bowels are regular, and contain bile. Yours truly,

Inverness-terrace, March, 1878. W. WIGMORE, M.R.C.S. Eng.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following were the questions on Anatomy and Physiology submitted to the 162 candidates at the primary examination for the diploma of Membership of the College on the 29th ult., when they were required to answer at least four (including one of the first two) out of the six questions:—

1. Describe an act of respiration, and the changes which the blood and air undergo.
2. Describe the mucous membrane of the dorsum of the tongue.
3. Describe the ethmoid bone and its articulations.
4. Describe the scalenus anticus muscle, its attachments and relations.
5. Describe the course, relations, and branches of the anterior tibial artery from its origin to the ankle-joint.
6. Describe the dissection required to expose the trunk of the musculo-spiral nerve. Give its branches and their distribution.

A Constant Reader.—It is usual and, we think, necessary, to call a medical man who has seen a patient *before* death, but declines to give a certificate of the cause, at the inquest.

Dr. Engledue Prideaux.—See Dr. L. Clarke's paper in the Philosophical Transactions for 1858.

MEDICAL WORK AND PAY IN FACTORIES.

To the Editor of THE LANCET.

SIR,—"A Travelling Member of the Profession," in your issue of the 23rd of February, expresses disgust with the code of charges in the Manchester Medico-Ethical Association; but what can he say to the value the practitioners in the north of England often put upon their services? In an iron manufacturing town the workmen, amounting to a few hundreds only, had to select their medical officer by vote. For fifteen years it had been held at the sum of twopence per week each man and boy, for which he was required to attend all accidents and illnesses to men, their wives, and children under thirteen, extract teeth, and supply all medicines, bandages, &c. &c. Three fully qualified practitioners incurred the trouble and expense to freely circulate printed testimonials to their merits, and, moreover, by proxy and person canvassed the voters so strenuously that they naturally thought it too good a thing, and imposed, with other things, the following:—

"Every man to pay to doctor twopence per week, boys one penny. Every man, wife, and family at home unmarried, to receive *proper* medical treatment. In case of neglect when sent for, another doctor to be called in, and his bill to be deducted from the pence stopped off at the office. Should an assistant be required, he must be a *Licentiate of Medicine*. The works' doctor must appoint another qualified practitioner in the town for cases of emergency. In addition to the surgery at his residence, he must have a branch surgery near the works, at which hours of attendance must be fixed, and the doctor to attend at least once every day, and to attend all cases within a radius of two miles from the works. To keep up a supply at the works of lint, wadding, sticking-plaster, and oils for cuts, bruises, burns, &c., and any other materials thought necessary. A month's notice to be given on either side."

The document from which the foregoing terms are extracted finish with, "Candidates nominated objecting to sign the foregoing rules will be disqualified." The "Travelling Member of the Profession" must feel sorry for the latter, and surprised to hear that, being considered in those parts too good for any one man, two combined so as to double the votes, and are so proud of the honour conferred upon them as to have made it known to the public in general, and the profession in particular.

Yours &c.,

March, 1878. A MEMBER OF THE PROFESSION.

ASYLUM SUPERINTENDENTS AND THE NEW COUNTY BOARD BILL.

To the Editor of THE LANCET.

SIR,—I have been patiently waiting week after week to see some of the heads of our profession taking some steps to try and procure for us a proper *locus standi* in this Bill. Not a word have I seen written or heard.

It seems to me that we are to be handed over to a mixed Board, the great majority of whom know us not, and care for us less; whereas now we are working under a body of gentlemen who not only know, but thoroughly appreciate our services, and will, when the time of "pension" has to be discussed, do us justice, and reward us according to our merits and length of holding office. Why we are to be thus ruthlessly thrown aside I cannot divine! Where are the "great guns" of our specialty? Where are the Commissioners in Lunacy? Surely they are the most fitting persons to step in and secure for us our rights; they have their salaries and pensions secure. Why not we who work under their supervision? They must know our deservings after years of harassing labour and trouble, and I again repeat, if they will not help, where are we to look? Every asylum superintendent must feel his future to be a doubt—aye, a dismal one too; and although I am not in the habit of crying out before being hurt, yet I do feel now the greatest possible need of our raising our voice in our own defence. Sir, help us. You can; you often have helped others; write for us, and earn more and more the gratitude of our profession, and amongst them,

Yours most truly,

March, 1878. A MEDICAL SUPERINTENDENT.

*** We have stated our views on this subject in the leader columns this week.—ED. L.

MEDICAL STUDY IN VIENNA.

To the Editor of THE LANCET.

SIR,—With reference to my letter in your issue of March 23rd, will you allow me to say that, having just returned from Vienna, I shall be very happy to give any gentleman who thinks of going there to study whatever information I can on the subject.

I remain, Sir, yours &c.,

THEODORE MAXWELL, M.D.

38, Woolwich-common, April 2nd, 1878.

VILLAGE NURSES.

WE are glad to see that the practice of having trained nurses in country districts to visit the sick poor at their own homes is largely on the increase. At Thames Ditton a fund has been formed for the support of a nurse, and already the poor are finding benefit from her ministrations, under the superintendence of some of the philanthropic ladies and gentlemen of the district.

Mr. M. Delmard.—Apply to the Secretary of Guy's Hospital.

THE UNIVERSITIES OF GLASGOW AND MELBOURNE.

To the Editor of THE LANCET.

SIR,—I am somewhat surprised at the silence of the Glasgow University authorities on the subject of "Cantab.'s" letter, which appeared in the pages of THE LANCET some time ago, as one would imagine such reports, if left unchallenged, would have a tendency to militate against the value of degrees conferred by that University, and possibly in the course of time to do it considerable injury. I am hoping such a state of things does not exist in any British or Irish University, and I am therefore glad to see Mr. Violette's letter in your impression of this week, as he, being an Australian, and acquainted with many from his country studying in Glasgow University, ought to be able to give a true account if such favours have been or are conferred on Melbourne undergraduates. He says distinctly that "students from Melbourne receive no undue preference, only receiving credit *pro tanto* for any certificates of examination and lectures they can produce."

I have known a number of men migrate from British and Irish Universities to Glasgow in search of degrees before and since the new regulations of 1860 came in force, and these men in no instance got credit for any class or *annus medicus* they could not produce certificates for having attended regular and distinct courses of lectures on the subjects they wished to obtain credit for. I should, therefore, be glad if any of your readers would kindly inform me why Glasgow University should deal so leniently with students from an almost unknown University, when they are so strict in testing the various certificates &c. produced by men who have studied in some of our oldest and most honoured Universities and schools of Great Britain and Ireland. I do not know when Melbourne University received its charter; but I see the site of the town itself was laid out so recently as April, 1837.

I am, Sir, very truly yours,
Skipton, Yorks, March 25th, 1878. WM. WYLIE, M.D., &c.

*** This correspondence must now close, unless the authorities of the University of Glasgow see fit to answer the statements contained in "Cantab.'s" letter.—ED. L.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Erichsen, London; Mr. W. Adams, London; Mr. Butler, Forres; Dr. Renton, Hamilton; Messrs. Kilner Brothers, London; Mr. Fisher, London; Mr. Land, Cobham; Mr. Thomas, Newport; Dr. Edwards, Cheltenham; Mr. Sieng, Tavistock; Dr. Willis, Barnes; Mr. Beal, London; Dr. Lloyd, Lambeth; Mr. Wicks, Newcastle-on-Tyne: Mr. Ridout, Pimlico; Captain Fortescue, London; Mr. G. S. Smith, Bangkok; Mr. Kamat, Shoepore, India; Mr. Moreton, London; Mr. Field, London; Mr. Barter, Macclesfield; Mr. M'Rae, Penicuick; Mr. Crouch, London; Mr. Goyder, Bradford; Mr. Evans, Anglesey; Mr. Pearce, Holsworthy; Mr. Delmard, Manchester; Mr. Capon, Dorchester; Mr. R. Smith, London; Messrs. W. and D. Harvest, London; Messrs. King and Co., London; Mr. Blomfield, Lynn; Dr. Hurley, Withern; Dr. Maxwell, Woolwich; Mr. Kukley, South Shields; Dr. R. Neale, London; Messrs. Pilgeram and Lefeore, London; Mr. T. Hawksley, London; Messrs. White and Pike, Birmingham; Mr. M'Intyre, Rotherfield; Dr. Fox, Chelmsford; Dr. Fitzpatrick; Dr. Cresswell; Mr. Hall; Mr. Shires; Dr. Hadley; Dr. Powell, Bromyard; Mr. Kelly; Mr. Berridge; Dr. Banks, Mapleton, Iowa; Mr. Cowper; Dr. Thornley, Newry; Mr. Deane; Dr. Ramsden, Ravensthorpe; Dr. Cuolahan, Bermondsey; Dr. Buchanan, Glasgow; Mr. Richardson; Mr. Gray; Mr. Sampson; Dr. Tatham, Manchester; Mr. P. E. Hill, Crickhowell. Dr. Macnab, Bury St. Edmunds; Dr. Jones, Menai-bridge; Mr. W. Williams, London; The Registrar-General of Edinburgh; T. O. W.; Another Surgeon-Major; T. B.; A Dublin Student; Fairplay; Jonah; General Practitioner; F.R.C.S.; Enquirer; E. P. H.; L.R.C.P. Edin.; P. H. V.; Index; A Constant Reader; Scalpa; A Student; Visitor; Surgeon; The Registrar-General of Births &c.; X.; Surgeon-Major; Candidate; T. S. T.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Taylor, Cottishall; Messrs. Bleeck and Leach, Bath; Mr. Randall, Neath; Mr. Davis, Mountain Ash; Mr. Batten, Bromsgrove; Dr. Buckoll, Nottingham; Mr. Salter, Bath; Mr. Rutherford, Newcastle; Dr. Pearson Seymour, Cape Colony; Dr. Wegg, Coleville, Jamaica; Messrs. Porteous and Co., Glasgow; Mr. Spowart, Great Ayton; Mr. Warren; Mr. Elliott; Mr. Harthan; Mr. Brooke; Mr. Kenny; Dr. Pickering, Bolton; Mr. Smith, Coxwold; Dr. Bryan; Dr. Baker, Birkenhead; A. B., Aberdeen; Scapula, Newtown; Delta, Glasgow; M.D., Manchester; B. C. G.; Medicus; M. D.; M. R. C. S., Oldham; B. C., Newcastle; Aleph; R. W. S., Birmingham; Medico; Beta; Pharmacien; Assistant, Worksop; W. M.; W. W. C., Eastbourne; M. B., Kilkhampton; M.R.C.S., Huddersfield; Physician; Surgeon; J. T.; C. W., Wells.

Newcastle Daily Journal, Kidderminster Shuttle, West Middlesex Advertiser, Era, Manchester Guardian, Sheffield Daily Telegraph, Ballarat Star, British Architect, Social Notes, Spiritualist, &c., have been received.

Medical Diary for the ensuing Week.

Monday, April 8.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Mr. Wm. Rose will exhibit a Child from whom he has removed the half of the Lower Jaw.—Mr. Fisher will show two Cases of Congenital Talipes.—Dr. Sansom: "Notes on some common Disorders of Children."

Tuesday, April 9.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Garrod, "On the Protoplasmic Theory of Life, and its bearing on Physiology."
ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8 P.M.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8 P.M. Ballot.—8½ P.M. Dr. Southey, "On some Points in the Minute Anatomy of the Kidney which have important bearings on its Physiological Functions in Health and Disease."—Mr. Jonathan Hutchinson, "On Paralysis of the Internal Muscles of the Eye, a group of symptoms which usually indicate Disease of the Lenticular Ganglion."

Wednesday, April 10.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Lumleian Lectures: Dr. Bucknill, "On Insanity in its Legal Relations."
HUNTERIAN SOCIETY.—7½ P.M. Council Meeting.—8 P.M. Mr. Davies-Colley, "On a Rheumatoid Affection of Joints in Women."—Dr. Galabin, "On the Treatment of Prolapsus Uteri."
EPIDEMIOLOGICAL SOCIETY.—8½ P.M. The President, "On the Plague and Typhus Fever in India."

Thursday, April 11.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
ROYAL INSTITUTION.—3 P.M. Professor Dewar, "On the Chemistry of the Organic World."

Friday, April 12.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Lumleian Lectures: Dr. Bucknill, "On Insanity in its Legal Relations."
QUEKETT MICROSCOPICAL CLUB.—8 P.M.
ROYAL INSTITUTION.—8 P.M. Weekly Meeting.—9 P.M. Sir Joseph D. Hooker, "On the Distribution of Plants in North America."
CLINICAL SOCIETY OF LONDON.—8½ P.M. Mr. Nunn: (1) "Electrolytic Treatment of Epulis"; (2) Plantar Bunion."—Dr. Semon: "Bilateral Paralysis of Crico-arytænoidei Postici Muscles" (living specimen).—Dr. Barlow and Mr. Marsh: "Ovariotomy in a Child aged twelve years."—Mr. Barker: "Wound of an Abnormal Obturator Artery in an Operation for Femoral Hernia."

Saturday, April 13.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Professor Pauer, "On the Calvecinistes and their Works" (with Musical Illustrations).

NOTICE.

In consequence of THE LANCET being frequently detained by the Post Office when posted for places abroad *more than eight days after* publication, subscribers and others are reminded that such copies can be forwarded only as book packets, and *prepaid* as such.

TERMS FOR ADVERTISING IN THE LANCET.

For 7 lines and under	£0	4	6	For half a page	£2	12	3
For every additional line	0	0	6	For a page	5	0	0

The average number of words in a line is eleven.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

N.B.—All letters relating to Subscriptions or Advertisements should be addressed to the Publisher.

Agent for the Advertising Department in France—
Mons. DE LOMINIE, 208, Rue Grenelle St. Germain, Paris.